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ABSTRACT

The abbreviated proceedings of the 18th Annual Forum of the Association for Institutional Research on balancing needs and resources are presented. Three of the five major addresses are presented in their entirety; the other two are summarized. The invited general session addresses included: "Talent for the 1980's" (Russell Edgerton); "If You Don't Know Where You're Going, Any Road Will Take You There" (Warren W. Gulko); "Some Thoughts on the Lower Profile of Higher Learning" (Elspeth D. Rostow); "Some Reflections on the Current Position and Future Outlook of American Higher Education" (Howard R. Bowen); "The Uneasy Alliance--The State of Government-University Relations" (Jack W. Peltason); and "Roundtable--Balancing Needs and Resources: A State Perspective" (Bert R. Biles et al.). Abstracts and summaries of contributed papers, seminars, symposia, special interest group meetings, and workshops are included. A brief description of the Sidney Suslow Outstanding Forum Paper Award is provided. Also presented are the minutes of the annual business meeting and a list of the forum registrants. (PHR)

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THE ASSOCIATION FOR INSTITUTIONAL RESEARCH
ANNUAL FORUM PROCEEDINGS No. 1

# Balancing Needs and Resources

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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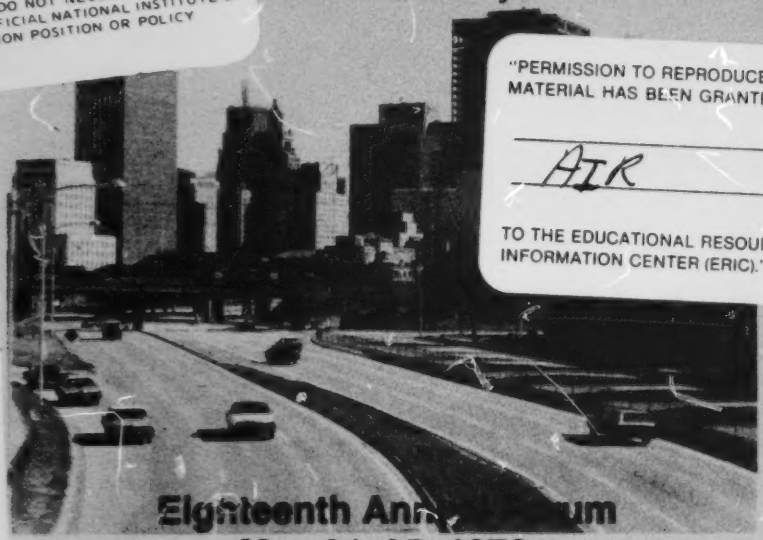

Eighteenth Annual Forum
May 21–25, 1978
Hyatt Regency Houston
Houston, Texas

HE 011 942

**18th ANNUAL FORUM**
**THE ASSOCIATION FOR INSTITUTIONAL RESEARCH**
**May 21–25, 1978**
**Hyatt Regency Houston**
**Houston, Texas**

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# Preface

This is the first issue in the new series of abbreviated *Proceedings* of the annual AIR Forums. The purpose of this new format is to provide a resource document that will chronicle the major events of the Forum and present them under a single cover. This first issue contains material from the Eighteenth Annual Forum held in Houston, Texas, May 21–25, 1978.

Within its covers you will find abstracts or descriptions of nearly all contributed papers, seminars, symposia, special interest groups, and workshops. In addition, three of the five major invited addresses are printed in their entirety; the additional two are summarized. You will also find a brief description of the Sidney Suslow Outstanding Forum Paper Award, which was presented for the first time in 1978, and the complete minutes of the Annual Business Meeting.

Requests for additional information or copies of individual papers described in this volume should be directed to the authors, whose names appear in a complete listing of Forum registrants in the last section of the book. Many of the papers presented in Houston will be available later in 1978–79 through the ERIC Clearinghouse on Higher Education in a special collection of AIR Forum papers. In addition, several of the Forum presentations will be included in a forthcoming issue of the AIR journal, *Research in Higher Education*.

The free exchange of ideas with Robert Fenske concerning the major revision of the *Proceedings* contributed greatly to this publication becoming a reality. His comments and suggestions were very much appreciated. The assistance of Jean Chulak in handling the last-minute changes, corrections, and revisions also made the task much more pleasant.

It is the sincere hope of the Publications Board and this editor that the information contained in this publication will be of value to the Association and to its members.

PAUL J. STASKEY
Northern Arizona University
1978

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| Los Angeles—1976 | *Conflicting Pressures in Postsecondary Education* |
| Montreal—1977 | *Research and Planning for Higher Education* |
| Houston—1978 | *Balancing Needs and Resources* |

# Invited General Session Addresses

# TALENT FOR THE 1980s— SOCIAL CHANGE AND THE REDEFINITION OF BACCALAUREATE EDUCATION

*Russell Edgerton*
*Executive Director, American Association for Higher Education*

I am pleased to have been asked to address the "needs" side of the equation of the conference theme, Balancing Needs and Resources.

It's been several years now since society's need for higher education surfaced as a public issue. I still remember—it was April 26, 1976—when my copy of *Newsweek* arrived with the big red letters running across the front cover: "Who Needs College?" Behind the caption was a college graduate, decked out in cap and gown, holding a steam hammer as a member of a road construction crew. He looked most uncomfortable.

I thought at the time, and still do, that this public questioning of the value of college marked an important turning point in the post-World War II history of higher education. Our services are not as tangible and immediate as those provided by firemen, policemen, nurses, grammar school teachers, or garbage collectors. Our political support has tended to depend less on our clout as a vested interest than on our identification with the ennobling and enlightened aspirations of our society. To question this identification is to shake the foundations. The public is mad at the cost and quality of health care, elementary and secondary education, and other services, but only in higher education is the basic *need* for the service in the first place a matter of public discussion.

However, while we now have a doubting public, none seems to be concluding that a college education is unnecessary. Students can't afford to draw this conclusion, for reasons I'll touch on later. And the constituencies which govern and finance our institutions have been more influenced by the amount of money left in the treasury, football scores, and other things than their new doubts about the value of college. While support for higher education, like that for Jimmy Carter, is "soft," financial commitments have been maintained, and even increased.

What *has* happened though is a marked shift in the kind of higher education our incoming students and our external governing and support constituencies think is important. Students have become fearful about finding work and have shifted out of the arts and sciences and into practical, career-oriented fields. State legislators and others, who have always preferred a practical curriculum, have encouraged and even compelled this shift. The liberal arts have been thrown on the defensive. In reference to changed social expectations, the major story of the 1970s is the erosion of support for that part of higher education which is not obviously related to preparation for specific jobs, careers, or professions.

We have been called upon to justify the benefits of college in general, but the kind of higher education we call liberal and general is what has been really challenged. With a few exceptions, we have responded with the "old-time religion" about the

wonderful virtues of the liberal arts—a response which has not made a dent in the public's appreciation of the need for this kind of education. And now come the 1980s, with a projected sharp decline in precisely those students who have traditionally been most interested in the liberal arts curriculum.

Among our highest priority agenda items, therefore, is the need to clarify the kind of talent society really needs in the 1980s and the role higher education can play in producing it. My own belief is that the self-interest of the arts and sciences faculty coincides with our greatest social need. We need centered people for an increasingly rootless society; participating people for a society in which the complexity and scale of things is diminishing our sense of efficacy; flexible and adaptable people for a society of rapid change. I believe the arts and sciences faculty can further the development of such individuals.

But to get from here to there, we need, first, to explore and communicate the connections between the undergraduate experience and the challenges of contemporary living. General preparation in the context of a baccalaureate degree has to be related to what people are preparing for. At present, we are not even communicating in an intelligible fashion what we intend our students to accomplish and why this is important in light of the changing requirements of society. And second, we need to perform this task, to deliver on this promise.

This task I'm promoting might be labeled the redefinition of baccalaureate education. In this presentation, rather than argue the specific direction this might take, I'd like to build the case for why this redefinition is necessary.

**Social Change and Educational Purposes**

To define the kind of higher education we need at any given time, we must look at the changing expectations for our services held by individuals and the society at large. One aspect of this is to assess who the incoming students might be and what they want—the issue of student demand. A second aspect is to assess what kind of talent society requires in its collective interest—requirements defined by governing authorities and funding sources. Finally, colleges and universities must read these expectations and select those most consistent with their own view of their role.

Put differently, the academic leaders of a particular institution have three places to turn for information about what their institution's purposes should be. They can look to the changing nature and interests of incoming students. They can look to the changing requirements of the society these students will enter. And they can look to their own history, traditions, commitments, and abilities as educators.

Each of these different sources has its champions. The faculty are prone to look within, to the history and traditions of academia. The students champion their interests, and external authorities assert collective needs for certain kinds of manpower. Operational purposes emerge out of the interplay and balance among these forces, and at different times the power and influence relationships among these constituencies change.

Using this framework, I'd like to look first at how we got where we are, because there are some basic lessons to be learned in this. Then I'd like to look at two futures—one if things go on as they are and a second that we might try to bring about.

**The Past**

Irving Kristol once said that the 20th century began in 1945. This is a useful way to make the point that a number of the social forces which have propelled us into our present state really took off at the end of World War II. So it was with higher education.

If we look at what has been expected of higher education since World War II, the most obvious and fundamental point is that we have never been viewed, or accepted, as an end in ourselves. Both the individuals who choose to attend and the social interests which support us have viewed us instrumentally, as a means by which they could accomplish other purposes. The perception of the need for our services has varied according to whether we could contribute to the solution of *other* problems which individuals and society wanted to address.

Up to now, most of the perceived need for our instructional function has had to do with two great expectations: one, that we were a crucial way station for individuals who wanted to advance their careers and social status; and the other, that we could develop and train experts which the society needed for defense, to solve domestic problems, and to staff a growing economy.

**Expectations for Social Mobility**

The way both these expectations developed illustrates just how instrumental higher education has been perceived to be. The modern expectation about our role in social mobility really started with the GI Bill (Henry, 1975). Remember, this bill was not a higher education act but a readjustment act. The Administration and Congress saw an economy which had been thriving on wartime demand suddenly going slack, and they saw lots of GIs coming home to unemployment. The bill was not really very visible or controversial and passed with little opposition. At this time, the Army estimated that maybe 12% of the veterans might take advantage of it. Lo and behold, in the fall of 1946, over one million veterans enrolled in college. By the fall of 1947, enrollments in college were twice what they were in the pre-World War II years. More than one out of every two students in college was being supported by the GI Bill.

Not only did the veterans attend in unprecedented numbers, but their performance as college students exceeded everyone's expectations. James Conant went on record as saying that the veterans were the most promising and mature students Harvard ever had. So by the 1950s, with this experience under their belts, educators were able to argue that the social investment in higher education for "the average American" had benefited the nation in a number of ways. The common-sense appreciation of this by the public was bolstered by sophisticated arguments propounded by economists showing that a social investment in education was at least as likely to bring a social return as an investment in the oil business. So we were off and running.

In the 1960s, the idea that higher education was a good investment both for individuals and for society was joined to our rising concern for social justice. The result was the most potent argument we've ever devised: equality of opportunity.

The other thing which happened in the 1960s, of course, was a demographic revolution which literally transformed our society and produced an enormous new demand for our services. If we go back to the beginning of the decade of the 1960s and look at the number of people aged 14 to 24 who might properly be classified as youth, we find that this group increased by 1.3 million people every year for ten years. This ten-year increase was greater than the growth in the youth population for the whole first part of the century (Wilson, 1977).

We all let these statistics wash over us, and it's hard to grasp their implications. But Norman Ryder of Princeton put it more dramatically than anyone else I know. He pointed out that every society is invaded by barbarians—youth—who must somehow be socialized and turned into people we want to live with (Wilson, 1977). Well, in the decade of 1950, the invading army (those aged 14 to 24) were



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outnumbered by the defending army (those aged 25 to 64) 3 to 1. By 1970, the ratio had changed to 2 to 1. This simple fact had an enormous effect on the politics and social life of the period. A lot of things which happened, which we attribute to events such as the Vietnam war, can be explained, in part, by the sheer number of young people in our midst.

In response to this, we grew at a phenomenal pace and got used to doing so. I was one of those who had the intelligence and foresight to be born in 1938. This means that I came of age between the Korean and Vietnam wars and got my Ph.D. in 1965, during the boom. The political science department at the University of Wisconsin, which hired me, hired four other professors in my year, five the next year, and five the year after that. I was part of a generation of fifteen new professors who all saw ourselves doing Wisconsin a favor by condescending to come to the Midwest to teach. Overall, between 1957 and 1967, as much capacity was added to the country's educational resources as had been provided during the previous 300 years.

Realizing this gives some needed perspective to our current problems. It's not that we've fallen on hard times. It's that the 1960s were extraordinary times. Our own expectations about our own role became inflated during these years and have contributed to our current "downer" mood.

What happened in the decade of the 1970s is that we were so successful that we simply overtook the rate at which the economy was growing. Employment conditions facing college graduates began to change in 1969. A general slowdown in economic growth and a decline in the need for elementary-secondary school teachers contributed to the reduced demand, but the principal reason was the supply of college graduates. In the seven-year period from 1962 to 1969, four million college graduates entered the labor force. Seventy-three percent of these found their way into professional and technical occupations and another 17% into managerial and administrative occupations—that is, the jobs we've tended to consider "college type" jobs. In the seven-year period from 1969–1976, the number of college graduates doubled. The number of people entering professional and technical occupations dropped to 47%; 19% entered managerial and administrative jobs. This left 25% of those graduating from college—1 of every 4—to spill over into sales, clerical, blue collar, service, and farm-type jobs which had not traditionally been sought by college graduates (Hecker, 1978).

Yet young students are still compelled to attend college. From the point of view of a student interested in career success, it is even more risky than before not to have a credential. The Labor Department tells us that over the next few years, approximately three of every four openings in technical and managerial occupations and one of every two openings in managerial/administrative occupations will require a college degree. Requirements are increasing because jobs are becoming more complex. But also, employers are engaging in "buyers' credentialism," raising standards of educational attainment in response to excessive supplies of labor. So while *having* a degree no longer guarantees a good job, *not* having one can knock a person out of the running.

What did happen, as I've said, is that expectations shifted about the kind of college education a person should have. Some people have been surprised by the shift in preferences toward vocational and professional programs. But in light of what we have always known about the motivations for attending college, the shift seems quite understandable. Students have always seen college as a ticket to career advancement. But in the 1960s, when the market was expanding and the scarcity value of a college degree was high, students could afford to play around a bit. The future was assured—and thus not of great concern. Employers, likewise, were

happy to hire people with the label "college graduate." The degree itself was a satisfactory screening device. When larger numbers of students all had degrees, screening began to shift from degrees to particular courses of study which students had pursued.

The Carnegie Council (1977) has recently published some data on what happened to undergraduate enrollments from 1969 to 1976, the years the labor market shifted:

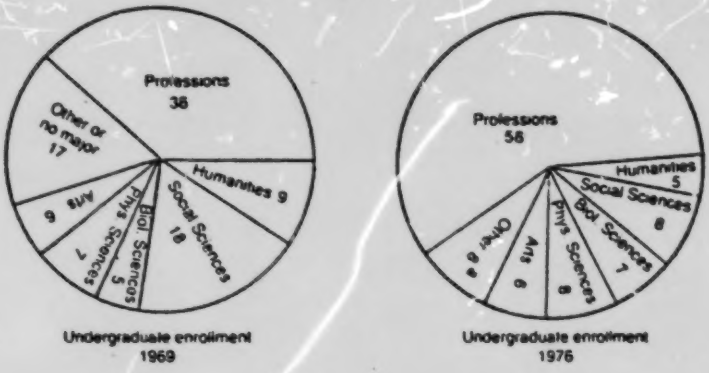


Figure 1. Changes in undergraduate enrollments, 1969–1976. (From *Missions of the College Curriculum*. San Francisco: Jossey-Bass, 1977, p. 103. Copyright © 1977 by The Carnegie Foundation for the Advancement of Teaching. Reprinted with permission.)

**Expectations for Supplying Manpower**

World War II also laid the basis for thinking of colleges and universities as suppliers of manpower required for critical national needs. During the war, the government asked many colleges and universities to train military personnel. Colleges provided a battery of short, intensive courses to supply technical workers in fields important to national defense. And then came the revolutionary notion, proposed by Vannevar Bush, that scientists staying in their own laboratories on campus be mobilized for research related to our national defense.

Since then, we have time and again responded to social needs expressed in terms of manpower shortages. The perceived needs for our services has varied according to two main factors. Did the character of problems on the national agenda seem to require trained experts to solve them? And, were colleges and universities identified as the place to develop these experts?

In the 1950s and 1960's, expectations about needed manpower reinforced the booming expectations about social mobility. There was the shortage of teachers for elementary and secondary schools. There was the shortage of faculty for the rapidly expanding system of higher education. And there was the need for scientists to keep up with the Russians.

As the Europeans always say, we tend to address our problems head down and at full speed. By the late 1960s, we had beat the Russians in the space race, and we were charging past our actual needs for teachers and faculty. Moreover, the character of problems on the national agenda began to change. The great society



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issues—crime, poverty, decay of the cities—were less scientific and technological challenges than they were social and political challenges. It was hard to argue that these issues would yield to armies of experts trained by colleges and universities.

So, expectations sagged, and the graduate and research-based sectors of higher education began to hurt. Then, things picked up. First, we discovered a doctor shortage. I remember when the Assistant Secretary of Health proclaimed in 1970 that we were 50,000 doctors short. There were a few impertinent intellectuals in HEW at the time who pointed out that doctors and hospitals don't have much to do with health. South Dakota, I believe it was, had one of the healthiest populations and lowest doctor-per-person ratios in the nation. But the proposition of a shortage had great political appeal, and so the government stepped in, massively, and increased the supply of doctors by 60%. Then, the Arabs came to our rescue, and the shortage of experts in energy-related fields, as well as for the broader issues of ecology, became a new problem that colleges and universities could do something about. More recently, the Russians have been acting up. In the last two years of the Ford Administration and into the Carter Administration, there have been considerable increases in energy- and defense-related expenditures for higher education.

**Higher education's "reading" and response.** These shifting expectations provided, if you will, the external context within which faculty and administrators operated. What is striking about the 50s and 60s is the enormous latitude which faculty had. The young, high school graduates who started attending college in massive numbers were quite open to being told what they needed to know. Witness the thousands who wandered into our offices asking what they should major in. Even in the graduate fields where support was provided for specific purposes, faculty and administrators managed to pursue their own definitions of what was important. Federal funding for graduate departments was very uneven by field, and graduate student support was even more uneven—with heavy concentrations of external support in the hard sciences. Yet all fields expanded, and in many universities the social sciences expanded even faster than the hard sciences (American Council on Education, 1971; U.S. Department of Health, Education and Welfare, 1966, 1967, 1968, 1969, and 1970; and Kidd, 1972).

In short, the professionalization of higher education described by Riesman and Jencks was able to unfold pretty much according to its own internal logic. While institutions differed in emphasis and mission, the operational definition of what a B.A. degree consisted of followed a common model. The expectations faculty held up to students emphasized the acquisition of knowledge through exposure to several disciplines and concentrated work in one. Academic specialization took over to the point that the B.A. degree became an umbrella for a great variety of specialities. According to Rudolph (1977), by 1960 there were 108 species of a B.A., and 426 species of a B.S. Students who went through this process were encouraged to see themselves essentially as knowledge specialists. If you asked them what they were prepared for, they would answer what their major field seemed to imply in terms of career possibilities.

In the 1970s, however, many faculty and administrators began to realize that their jobs depended on their being more responsive to the changes in the student market, and a number of adaptations began to take place. Lewis B. Mayhew (1977) has recently published a marvelous and grumpy book about all this called *Legacy of the Seventies*. In the 1970s, the ivory tower gives way to the academic shopping center—a development Lew is very down on. And, to be sure, higher education has become more concerned for adults, developed new delivery systems, supplemented residential faculty with part-time faculty, broadened the domain of development

we consider the proper concern of colleges, and in some cases even overturned the primacy of the faculty member as the crucial ingredient of higher education.

But in most places, the important reality, it seems to me, is that we are still operating on rather different definitions of utility. Most students are attending because they believe that higher education will make a difference to their chances for career advancement. External groups who represent the public or social interest in higher education are looking to overcome shortages of needed manpower. But the faculty measure utility in terms of whether or not they are contributing to their discipline.

While enrollment shifted in the 1970s, the distribution of faculty by field shifted much less. Consider, again, the Carnegie data (1977):

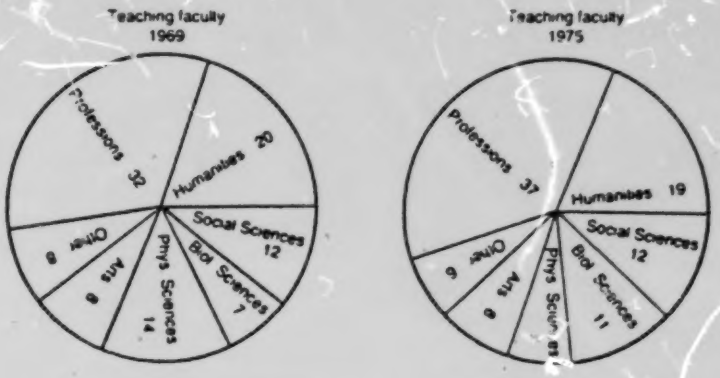


Figure 2. Distribution of faculty by field. (From *Missions of the College Curriculum*. San Francisco: Jossey-Bass, 1977, p. 103. Copyright © 1977 by The Carnegie Foundation for the Advancement of Teaching. Reprinted with permission.)

## The 1980s: More Adults, Careerism, and Specialization

Now, let's look at what the future holds for us. I will look first at changing student demand, then at changing manpower requirements.

**Student demand.** We know for sure that the overall group of people who are 16 to 24 years old will decline substantially: from 37 million in 1977 to 34.4 million in 1985 to 31.5 million in 1990—altogether a 15% drop (U.S. Congressional Budget Office, 1978). This won't change until the grandchildren of the GIs start coming of age in the late 1900s.

This represents a big loss of young students. The impact of the loss will, of course, vary quite a bit by state and region and type of institution. I find a good deal of awareness about declining enrollments as a national trend but much uncertainty about its specific meaning for any particular institution and a very human tendency to believe that this negative future will happen to someone else. I'm reminded of a friend who teaches an undergraduate course in future studies. She asked each of her students to write a scenario about the future of society, and most provided a picture of gloom and doom: rising terrorism, urban decay, and so on. Then, she asked them to write a scenario about their personal futures. Here, the returns included wonderful fantasies of living on a farm (but, of course, with convenient access to a big city),

two kids, sailboats, trips to Europe, and so on. It's hard to believe that general conditions will affect us personally.

Less noticed, but no less important, is the fact that the composition of this youth cohort will change (U.S. Congressional Budget Office, 1978). Birthrates among the higher income and better educated families fell earlier and farther than did birthrates generally; hence, the proportion of the young people whose parents are high school graduates will drop. Birthrates among white families fell earlier and farther than birthrates among nonwhite families; hence, a higher percentage of young people will be minorities. So, not only will the overall youth population be smaller, it will look even less like a generation "ready for college" than in the past. Concern over the quality of incoming freshmen will intensify.

It's instructive to sort this overall youth population into two broad categories. There are those, reduced in number, who have typically been college bound, and will presumably be so in the future. Then there are those who are not necessarily college bound, but may be, and whose options also include (1) military service, (2) public training and manpower programs, such as CETA (the Comprehensive Employment and Training Act), (3) the civilian labor force, or (4) disappearance into the invisible world of the unemployed.

The role that colleges, especially community colleges, might play in serving this second category of youth will be bound up with events and developments in these other sectors. The military, Steve Bailey and others have been reminding us, is also running short of young people. In the early 1980s, the military may need as many as one of every four males turning eighteen. Like us, they prefer bright high school graduates. Like us, they offer impressive opportunities for training and education. Will the military outcompete us? Will there be a new draft, and will this trigger a new round of thinking about national service? Will colleges and the military develop ways to collaborate to the advantage of the youth in question? CETA, too, is expanding rapidly. One-half of all people unemployed are under 25. Since few colleges see themselves as part of the nation's manpower training system, it's less likely that higher education will get involved with the local CETA bureaucracies. But the needs, and opportunities, for buttressing job programs with genuine educational opportunities are immense.

What can we expect about the kind of education the college-going youth of the 1980s will demand? The shifting overall composition of students will probably bring an even greater demand for courses of study which prepare students for entry-level jobs. On the other hand, college graduates may have an easier time of it generally in the labor market, and this may relax the 1970s' preoccupation with preparing oneself for specific jobs. I say this for three reasons. First, the same demography which is going to reduce the numbers of young people attending college will reduce the numbers of young people entering the labor force. The baby boom generation will be crowding the mid-level positions, but there will be less competition for the entry-level positions. Second, the rate at which women have been participating in the labor force will be hard to maintain at the same pace as in the 1970s—if only because many of the women who are going back to work have already chosen to do so. And third, we are all going to become more accustomed to seeing college graduates in nonprofessional and managerial jobs. So we won't make as much of this as we did in the 1970s when we were surprised.

What about "all those others," the students 25 years and older? What do we know about how many might return to college and what the nature of their interests will be?

The most basic observation to be made is that we are talking about people who

are caught up in circumstances and commitments more important to them than is their interest in higher education. We in education call them adult learners, but they don't see themselves as students at all like young people do. Rather, they see themselves as managers, lab technicians, secretaries, mothers, fathers, and so on, who might squeeze in time for courses at a nearby college or university.

What affects their expectations for higher education are the forces which are rapidly changing the nature of work, family life, community, and leisure throughout America. We are moving, it seems, steadily up a Maslow-type hierarchy. In this decade, we have seen a marked escalation in the expectation that work should allow for self-expression and meaningful involvement as well as income. We've seen a demand for jobs on the part of those who don't have them and a demand for better jobs by those that do. And even before Studs Terkel popularized the notion that it was legitimate not to like your job, it became OK not to like your spouse.

By the end of 1976, nearly half of all women were working or looking for work. In contrast to earlier times, most of these women were married, with school-age children. Out of 46 million intact marriages, over 21 million of the wives were working full- or part-time. The second largest category of female workers—now totaling 15 million—was women who were single, separated, divorced, or widowed, with divorced women showing the highest participation rates (Pifer, 1976).

There is no reason to believe that this quest for self-improvement will cease. Coupled with the trend toward continuing education for professionals, we can assume that in the 1980s (1) there will be great numbers of people interested in career advancement (the congestion in the mid-career ranks perhaps even intensifying this), (2) there will be a significant number of people whose lives are in transition—searching for something more, adrift in a sea of possibilities, and (3) there will be some, especially the elderly, searching for something pleasant to fill the leisure space in their lives. The question is, will this quest lead through higher education?

Patricia Cross (1978) has masterfully synthesized what we know about the current population of adult leaders. It is pretty much what we'd expect, even if the data were not available. The largest number are high school graduates or better, 25 to 34 years old, working, having family incomes of $15,000 to $25,000, and seeking education in order to improve their status. The most important predictor of an adult's interest in more education is his or her previous level of education.

But the number of adults who might participate in the future is hard to predict because so much depends on the character of the programs offered. Behind those who have already sought further higher education are literally millions of individuals who want to advance their careers and enrich their lives. There is what Louise Kapp Howe (1977) calls the invisible army of pink collar workers—the women who type our letters, hand us our airline tickets, and serve us our meals in restaurants. There are the blue collar workers who have increasing access to fringe benefit programs for further education. And many others. Case studies tell us what aggregate surveys sometimes miss. When programs are offered which are truly responsive to these people—and responsiveness includes recognition of their other commitments and responsibilities—they come out of the woodwork to participate.

The demand is there, if higher education meets these adults on their own terms. Adults are choosey. They prefer education which has a practical utility. Since most of the returning adults are interested in career advancement, we can expect most of the demand to be for courses of study which are job and career oriented. Only a small portion of the new adult constituency seems to be interested in the traditional,

discipline-based arts and sciences subjects which were sustained by the youth enrollments of the 1960s.

Finally, it must be noted that in serving these adults, colleges and universities face very stiff competition from business, industry, and government in-house training and development programs. Talking to training and development staffs in the large corporations is like going back to the sixties in higher education. Theirs is a world of growth and soaring expectations. Thus, we find again that the future role of colleges is intertwined with developments in another sector.

**Manpower requirements.** I want to be brief here. There are shortage areas which conventional supply-demand analysts can predict, but the lessons of the past suggest that it is very difficult to anticipate events, such as the Arab oil boycott, and their impact on society and higher education.

What is predictable is that—despite the noble efforts of Ivan Illich—the professionalism and specialization of our society will continue. In some areas involving basic human life processes—birth, food preparation, dying—there are movements afoot to recapture control from the experts. But even these are counter-trends to the dominant trends. In almost every other area, specialization proceeds at a fast clip.

I recently finished reading Kenneth Keniston's task force report on the American family titled *All Our Children* (1977). One of the main points of this report is that parenting has become essentially an executive and managerial function: our job is to coordinate the logistics of all the dealings our children have with the specialists who now serve them—school teachers, doctors, dentists, special music teachers, and, most recently, soccer coaches.

I find that I'm the last of the Mohicans—a father who thought he could teach his kids how to play ball, out in the backyard. But grammar school athletics is now modeled on the pros. They have leagues, uniforms, coaches, compulsory practices during the week, and games every Saturday. My role, my sons tell me, is to arrange the food preparation and transportation system so they can get to all these events.

The point is that the external demands placed upon higher education for the production of specialists will continue.

**Higher education's response.** Facing uncertain and fluctuating enrollments, a buyers' market, new competition from the military and the trainers in industry, incoming freshmen who are even less academically prepared than now, adult students who seek courses relevant to career advancement or professional retraining, and continued demands for the production of specialists of one sort or another, what will the response of higher education be? The natural and obvious response will be to cut back in the arts and sciences fields which aren't linked to professions and careers, to expand continuing and professional education, and to try to avoid, whenever possible, making long-term commitments to faculty. Which, it seems, is pretty much what's happening.

## The 1980s: An Alternative Future

To bring about an alternative future, we will have to activate an external constituency which appreciates and supports baccalaureate education as essential general preparation for living in a post-industrial society. And then we will have to provide effective versions of what this education can be.

**The utility of general preparation.** The kind of higher education we have labeled liberal and general has always had an external constituency. But this constituency has been drawn from the aristocracy or its modern-day equivalent. The

Ford Foundation is willing to support liberal education on faith. But in our increasingly publicly financed system, we're dealing less and less with the Ford foundations and more and more with the chairpersons of the ways and means committees—individuals pressed by many claimants, and already out in front of many of their own constituents in their support for higher education.

How do we deal with a more democratic constituency? We start by recognizing the most basic lesson of the past: most people have an instrumental view of higher education.

New public policy rationales such as "lifelong learning" and "the learning society" are useful analytical tools. They draw attention to important phenomenon like the cycles of life and the relationships between education, work, and leisure over the life-span. But they lack potency as rationales for claiming new resources for higher education because they implicitly assume that higher education should be supported as an end in itself.

Public values are changing, and interest in the quality of life is increasing. But I don't believe that the new emphasis on self-expression, autonomy, authenticity, and other similar values has produced a society ready to support higher education as an end value. Increasing numbers of people are opting for a noncompetitive and nonacquisitive view of life and careers, but this doesn't mean that they are spending more time in the library.

We are talking about capturing the attention of a governing constituency of individuals sharply aware that we are running out of energy, plagued with unemployment and inflation, and woefully deficient in our commitment to such basic rights as decent health care. The only language which will, or should, convince such individuals that higher education has a useful role in the general preparation of individuals for life is language which will demonstrate the connections between this education and the real life problems which people will encounter.

One task is, therefore, to characterize the changing contexts within which people will live and work and the kind of demands these contexts will make on the individuals who enter them. For example, take the contexts of work, citizenship, and personal fulfillment through family life and leisure pursuits.

**The changing context of work.** As we have been teaching people the specialized knowledge for meeting entrance-level requirements for jobs, the size and scale of the settings in which people work has been transformed. Large organizations now dominate our work lives and control most of the jobs in the country. Nearly 20% of the nonagricultural labor force work in the large bureaucracies of the local, state, or federal governments. Another 30% work for private businesses which have over 500 people on the payroll. Still others work for large nonprofit enterprises, such as hospitals and giant universities. In manufacturing, 42% of the workers are in corporations which employ over 10,000 people (Kanter, 1977).

The size and complexity of these environments diminish one's sense of efficacy, stifle initiative, and press people into the mold of the dull, impotent, bureaucrat—at a time when our need for initiative, risk-taking, and creativity couldn't be greater.

What these complex organizations need, more than anything else, is high order and managerial talent. Here's a quote, for example, from a 1977 study of the National Conference Board:

> A striking comment on the responsiveness and achievement, as well as the limitation, of the relatively uncoordinated complex of institutions that comprise our educational system is that—on the threshold of the post-industrial age—it is

about general work competencies, not specific technical skills and professional knowledge, that business executives most commonly complain.

When queried as to subjects, skills, or other areas receiving insufficient attention in the schools and colleges, or being overlooked or neglected, only one executive in seven mentions a specific skill or knowledge area.

By contrast, over 54% refer to language skills—English, communication, reading, writing, and so on—as areas of deficiency. Mathematical or computational skills are mentioned by 24%. Eighteen percent mention nonskill aspects of work readiness. The same executives complain of deficiencies in interpersonal skills. (Lusterman, 1977, p. 62)

Or, consider the complaints we hear from consumers who have to deal with the many professions in the so-called service economy. We hear some complaints about the inadequacies of training in speciality areas, but we hear a lot more about the lack of concern for clients and lack of competency in applying knowledge to serve practical ends.

From the individual's standpoint, it is crazy, as we've known for a long time, to prepare oneself only for an entry-level job or even one career. This may be even truer at the lower levels of the work force where vocationally oriented education reigns supreme. Here, there is more interoccupational mobility among workers than there is among technical and professional people. This is not to say that vocational education is bad or unimportant but that it is not enough.

**The changing context of community participation and citizenship.** Increasingly, we are controlled, regulated, or influenced in some way or another by decisions made in the name of a public authority—be this the sanitation board or the president of the United States. The decisions of governments at all levels are becoming increasingly important to our lives.

Yet, the conditions under which ordinary people can participate in these decisions have radically changed. Issues are so complex as to be unintelligible. And in the last ten years, the processes by which decisions are made have, themselves, become vastly more complicated, as we have tried to build values of openness, fairness, and equity into these decisions. We've created what David Riesman calls "traffic jam democracy."

The electronic media and the press have entered this picture as the great simplifiers who boil it all down into palatable—and often quite misleading—choices.

I could go on to cite disturbing data about the decline in voting and other indicators that all is not well with our democracy. What they add up to is the need for renewing the sense of efficacy and ability of individuals to participate in the decisions which govern their lives. One agent in this renewal, surely, is a system of higher education which can teach awareness and understanding of the interdependency among events and issues, which can develop habits and abilities of participation and restore faith that we, indeed, can control our destiny.

**The changing context of personal fulfillment.** Beyond the contexts of work and citizenship, there is the question of how we live with our families, cope with the logistics of life, and use our leisure time. Here we are caught in a paradox. The length of the workweek is decreasing for many people. But instead of being liberated, we are hassled by new pressures and anguished by the loneliness of a society where the traditional forms of community are disappearing.

The sense of place which comes from growing up in a familiar location is going. The continuity of friendship which comes from living and working in the same

place is going. The sense of rootedness which comes from being part of a stable nuclear family is going. Not for all, but for increasing numbers. In the past, all these things had something to do with growing up as a centered person.

So, increasingly, centeredness is not something which is given from one's social situation but something each person has to struggle to achieve on his own. How? How can we help people become comfortable with themselves, develop the capacity to use leisure time in fulfilling ways, cope with discontinuities and loss? As an alternative to government-subsidized access to psychiatrists (which would be difficult, since they all seem to live in San Francisco, Chicago, New York, or Washington, D.C.), we might think of a more self-conscious role for colleges and universities.

**The kind of educational experiences we might provide.** What would baccalaureate education oriented toward these external referents look like?

First, let me say what I'm *not* proposing. I'm not talking about a new set of courses. All too often, we respond to changes in the external environment by making whatever the problem is a discrete matter for study—urban studies, women's studies, black studies, labor studies. We don't necessarily need new courses on citizen action, divorce, family, or the creative use of leisure time. Nor do we need to throw out the disciplines.

Rather, what we within colleges and universities have come to accept as ends—the acquisition of information organized essentially along disciplinary lines—become means. The ends, the outcomes of baccalaureate education that we should really care about, are the possession of certain abilities which we find, again and again, are related to effective performance in external settings. These can be characterized in different ways and stated with varying degrees of refinement, but they all involve the ability to communicate, compute, reason, value, and relate and empathize with other human beings.

The role of the arts and sciences faculty would be to teach the foundation abilities which, combined with specialized knowledge in a particular career area, would prepare students for a successful life in modern society. This would mean that we would make no assumption that there is some given body of received wisdom which all students must know. There is no common core of knowledge, but there is a core of thought processes and other abilities which every person needs in order to function successfully.

We would pay more attention to styles of teaching which are sensitive to where students are really coming from. It's interesting to me, for example, that the human potential movement which has swept the country in the 1970s has occurred largely *outside* higher education. It is not necessarily higher education's role to take on the subject matter interests of these groups, but the whole movement tells us something about what people want. There is a hunger which I think is related to the breakdown of traditional forms of community. The many adults who are now returning to college are people in transition, people searching for meaningful communities. Yet, the typical classroom in higher education confines students to spectator roles in which they often don't even know the other students. Commuting students check in and out of college classes with almost no human contact whatsoever. My point is that the subject can be Greek if the group is a participating, intensive one. (One of the best ideas I've ever run across for improving education for commuting students was for commuter institutions to build or lease hostels so professors could regularly have retreats and turn anonymous classrooms into real learning communities.)

And, finally, we would establish processes for getting feedback about the real-world performance of our graduates. At present, our students receive their degrees

and disappear. Whether the knowledge, abilities, and attitudes they acquired were genuinely useful to them in their encounters with work and other settings is something colleges rarely ever hear about.

This lack of feedback is perhaps best illustrated by the contrast to high school students. The performance of high school graduates—especially their basic reading and writing skills—is now a national scandal. Why? Because the majority of students who leave high school seek entrance to college and take the SAT and other tests. We measure their performance—and college faculty and administrators in different institutions talk about how bad things are. But students leaving college do not, in large numbers, confront such a test, and the individual units which hire them don't communicate with one another about the performance of their new recruits. If they did, the quality of college graduates might also be a public issue.

How would we know when we have succeeded in delivering on our promise to prepare students for effective performance in our complex society? For starters, the students themselves would be much more explicitly conscious of their own abilities. If someone asked, What do you want to be, our graduate would reply: Well, I'm going to be a number of things in my life. That's really the wrong question. Ask me what I want to accomplish. This student would be the best lobbyist a college can have—an individual who looks back upon his college years with growing appreciation for the preparation he or she received.

**References**


American Council on Education. *A fact book on higher education* (First issue). Washington, D.C.: Author, 1971, pp. 17.30, 71.39.

The Carnegie Council on Policy Studies in Higher Education, The Carnegie Foundation for the Advancement of Teaching. *Missions of the college curriculum*. San Francisco: Jossey-Bass Inc., 1977, p. 103.

Cross, Patricia. Adult learners: A data-based description. *Toward life-long learning in America: A sourcebook for planners*. Berkeley: Educational Testing Service, 1978.

Hecker, David E. The jam at the bottom of the funnel: The outlook for college graduates. *Occupational Outlook Quarterly*. Washington, D.C.: U.S. Government Printing Office, Spring 1978, pp. 37–39.

Henry, David. *Challenges past, challenges present: An analysis of American higher education since 1930*. San Francisco: Jossey-Bass Inc., 1975, pp. 55–84.

Howe, Louise Kapp. *Pink collar workers*. New York: Avon Books, 1977.

Kanter, Rosabeth. *Men and women of the corporation*. New York: Basic Books, 1977, p. 15.

Keniston, Kenneth. *All our children*. New York: Harcourt, Brace, Jovanovich, 1977.

Kidd, Charles. Shifts in doctorate output by types of universities in the 1960s and projections for the 70s. Washington, D.C.: Association of American Universities, April 1972. (Unpublished.)

Lusterman, Seymour. *Education in industry*. New York: The Conference Board, 1977, p. 62.

Mayhew, Lewis B. *Legacy of the seventies*. San Francisco: Jossey-Bass Inc., 1977.

Pifer, Alan. *Women working: Toward a new society*. New York: Carnegie Corporation of New York, 1976, p. 4 (Reprinted from the 1976 Annual Report.)

Rudolph, Frederick. *Curriculum. A history of the American undergraduate course of study since 1636*. San Francisco: Jossey-Bass Inc., 1977, p. 9.

U.S. Congressional Budget Office. *National service programs and their effects on military manpower and civilian youth problems*. Washington, D.C.: Government Printing Office, January 1978, pp. 41, 43, 44.

U.S. Department of Health, Education, and Welfare, Office of Education, National Center

for Education Statistics. *Students enrolled for advanced degrees: Institutional data.* Washington, D.C.: U.S Government Printing Office, 1966, 1967, 1968, 1969, and 1970.
Wilson, James Q. *Thinking about crime.* New York: Random House, 1977, p. 13.

# IF YOU DON'T KNOW WHERE YOU'RE GOING, ANY ROAD WILL TAKE YOU THERE.

*Warren W. Gulko*
*President, The Association for Institutional Research*

As many of you know, the Association for Institutional Research began, essentially, on March 4, 1961, when the first Forum was held at the Morrison Hotel in Chicago, Illinois. Forty-three persons registered for that first Forum. Today, 17 years later, we have over 700 people registered for our 18th Annual Forum here in Houston. The Association for Institutional Research began as a formal, incorporated, nonprofit organization 12 years ago, in 1966. Our present organization grew out of the Stony Brook Forum held in May 1965, at which time the constitutional structure of the Association was proposed and accepted by the membership. In that initial year, there were 392 members. This year, our membership will be in excess of 1,500 members. We still have among us several people who participated in the first Forum back in 1961 and who were present at the May 1965 Forum that resulted in the creation of the Association as we know it today.

Those of you who hark back to those early days of AIR recall that the fundamental precept of the early Forum was that it served as the gathering place to meet old friends, to share old stories, to recall old triumphs and defeats. In short, AIR used to be an "old boys club." Although the structure of AIR has remained basically the same over these many years, we have grown considerably in size and in stature, both as an organization and as a profession. The annual AIR Forum is now regarded by many as the best higher education conference held in North America. One need only to reference this year's program to support that contention.

The stature of our profession and its importance in higher education decision making grows each day with the increasing complexity of operations for our colleges and universities and expanding information technology. We are the folks who provide the analysis to support rational decision making in colleges and universities throughout the world. I know that many of you share my frustrations that the analysis is not always timely nor is it always used appropriately. Nonetheless, I hope you will agree with me that each year increasing attention is paid by college and university decision makers to the analysis of institutional data in support of policy analysis and decision making. While the rate of change is perhaps slow, its direction is clear. As further evidence of the change in our profession, consider the radical change in our literature. Fifteen years ago, we were concerned with data definitions, simple analytic structures, and elementary statistical procedures for enrollment forecasting. Today, we are concerned with topics such as resource allocation, computer-based systems, educational outcomes, and international cooperation. In short, the practice of institutional research has grown in terms of complexity, in terms of required education and skills, and in terms of stature within the higher education community.

Although this growth in institutional research has taken place, both in substance and in size, the only organization in the world that is directed toward serving the needs of those professionals who practice this complex and often frustrating trade has remained somewhat static and unresponsive to the needs of the profession and to the needs of its membership. As an officer and president of AIR, I am, in part, to blame.

If we look ahead, we can forecast a doubling of the membership over the next decade—perhaps even sooner. Each year, additional nations recognize the importance of our profession, and we find a growing participation by our colleagues from other countries. In spite of this world-wide growth and interest, our association still functions essentially as the good old boys' club without regard to regional differences, without regard to international cooperation, even without regard to the incredible growth in the membership of the organization.

In recent years, three significant changes have taken place which attempt to recognize the transformation of our organization. The first of these changes was the establishment of an AIR office at Florida State University and the appointment of a permanent executive secretary to handle much of the ongoing logistical needs for AIR. The second major change was the establishment of nominating procedures independent of a self-perpetuating "insiders club." The third change, and most dynamic aspect of AIR, has been the increasingly professional approach to publications. And yet, the fundamental structure of the Association has remained essentially the same as it was designed twelve years ago to serve a membership approximately one-fourth the present size.

For these reasons, then, and based on my observations over the past six years, including four years of active participation as a member of the AIR Executive Committee, as last year's program chair, and as chair of various AIR subcommittees, I wish to propose to you today a restructuring of the Association for Institutional Research. I propose a restructuring of AIR in order to make our association more responsive to the needs of our profession and to the needs of our membership.

You know, after trying for the past three years to make some progress in considering a restructured AIR organization, I recently commented that we seem to make progress around here in a glacial fashion—sort of inches per year. My good friend and colleague, Bernie Sheehan, reminded me that progress in AIR is not glacial but, instead, granular—more like minute increments, an inch at a time!

One of the fundamental reasons for granular change in the Association is the lack of continuity for senior officers. Often, individuals are elected to the Executive Committee who are not familiar with association operations, and thus, it takes considerable time before they understand the various problems and mechanisms of AIR. As a result, executive committee members often serve effectively for only a portion of their terms as AIR officers. A more critical problem, however, is the fact that the presidency is but a one-year term which takes place following the all-consuming and somewhat debilitating task of Forum program chair. It was Jim Firnberg who last year commented that we are the only organization that punishes you twice for being president: the first punishment is that you must serve one year as Forum program chair, and the second punishment is that you must prepare and deliver the Presidential Address! I wish that I could convey to you my disappointment at not being able to accomplish any significant changes in the one year that I served as president. I have talked about this problem with a number of other past presidents who share my frustration. In order for your association to be effective in serving the needs of our profession, it is crucial that there be greater continuity in the office of the president, the singularly most important individual in the Association. It is time, therefore, to sever the long-standing tradition of linking the presidency to the responsi-

bilities of program chair. It is also time for our association to assure the election of our president from among the experienced members based on skill, leadership, dedication, and service to the aims of the Association. In order for the president to be effective, in order for the president to function in a manner that causes things to happen and causes change to occur, in order for the president to provide leadership to the Association, the president must serve in office for more than one year.

Another problem that occurs in the Association is the occasional lapse in representation of the various geographic constituencies of our membership. A way must be found to insure that each major geographic region of our membership is appropriately represented in the decision-making process. I recognize that there are many diverse dimensions to the AIR constituencies; however, I believe that using a geographic distribution will provide a better grass roots means of insuring that each member of the Association has an effective voice in the executive structure. Along these lines, it is also critical that the Association recognize its international responsibility to our growing profession in other nations of the world and provide an appropriate participatory mechanism for our friends and colleagues in areas outside the North American region.

My address to you today is a call to action. A call to arms, if necessary. A call to drag the Association for Institutional Research kicking and screaming into the mainstream of contemporary international higher education. My proposition is really quite simple: we need to broaden the effective scope of our representation, we need to provide a more effective election mechanism, we need to encourage participation beyond the United States and Canada, and we need to provide greater continuity for the senior officers. In order to do this, I propose four major changes to the organization of our Association.

1. The first change is concerned principally with the Forum. Organizing the Forum is becoming an increasingly difficult task for one individual to handle, particularly so because he or she undertakes the responsibility often without any prior experience or knowledge of past practices. I propose, therefore, that the vice president and program chairperson no longer be president-elect but, instead, serve one year as assistant program chair prior to undertaking the responsibility as vice president and program chair. And further, that this be an appointed rather than an elected post since it requires special skills and expertise. Thus, the appointment as program chairperson would be a two-year responsibility: the first year as assistant program chair with succession to the Executive Committee in the post of vice president and program chair in the second year of office.

2. The second major change regards the president whose responsibilities would be separated from the position of vice president/program chair and who would be elected to serve for two years. This change would also require that only people who have served as members of the major AIR committees might stand for election to serve as president. In this manner, we assure an experienced individual as president with sufficient time in office for that person to move the Association forward.

3. The third major change is the expansion of the Executive Committee and establishment of regional representation and regional election of executive committee members. I believe we need, in addition to the vice president and program chair, a Canadian vice president, a United States vice president, and an international vice president to represent those constituencies beyond the North American region. In addition, I propose that we establish five North American regions—one Canadian and four U.S.—with each region nominating and electing its own regional representative to the Executive Committee. As part of this proposal, any nation or contiguous group

of nations that constituted five percent of the Association membership would be eligible for regional election.

4. The fourth change would be to abolish the post of secretary which has now become an irrelevant position with the formal responsibilities of that office assumed by the AIR Executive Office.

The net result would be to increase the size of the Executive Committee from its present nine members to the proposed twelve members. However, the major structural change would be a constituent-based representation, a simplified election process, and, most importantly, a more responsive organization for the ongoing operation of our association.

To implement these changes will take a number of years. I'll try, with the support of your incoming president, Bob Wallhaus, to move these proposals forward in the next few months. However, your support is critical if you agree that these changes are necessary. I hope that I can count on your participation and support in the coming year.

## SOME THOUGHTS ON THE LOWER PROFILE OF HIGHER LEARNING

*A summary report, with excerpts, of an informal address by*
*Elspeth D. Rostow*
*Dean, The Lyndon B. Johnson School of Public Affairs,*
*University of Texas at Austin*

Speaking to the second general session of the Forum, Dean Elspeth Rostow called for new revolutionaries in the world of higher education. She outlined the process for changing directions in higher education and called for the elimination of the traditional hostility between academics and institutional researchers.

Introducing her remarks with the declaration that institutional researchers are "the mechanism from which those of us who are not institutional researchers hope that salvation may come," she said that she is not, however, "sanguine about the prospects."

> . . . since the 1960s ended and the resource problem became a reality to most of us, there has been a split in the academic community between those who can mastermind the research and the data—and, therefore, produce the necessary projections—and the rest of the academic community. I sense a certain hostility between my colleagues who are purely academic and offices of institutional research. Those who love such phrases as "disjointed incrementalism" have to share the same campus with those in whom such a phrase induces vomit.
>
> At the moment, I see very little effort to try to bring the two wings of the university together. My theme this morning is that this is the essential task of the years ahead because the planning of a university cannot be limited either to the president's office—with whatever tools [the president] may have at [his or her] disposal—nor, of course, can it be limited . . . to the faculty themselves in the face of the competitive situation in which the country, as a whole, finds itself . . . The task, then, of the late 1970s is to bring together the capacities which you represent—and which are so vital—and marry them to the major task of the university which, as I see it, is to produce the best possible teaching, the best possible research, and graduates of whom [it] may be proud.

After tracing its history, Dean Rostow emphasized that "the old agenda, then, the agenda of growth, the agenda of optimism, the agenda of the expectation of the continuation of abundance—this is clearly a part of our past." "I feel," she said,

> that we have, indeed, experienced six or seven years of a new agenda in America . . . At a time when we had an expanding resource base, the assumptions of the curriculum were, of course, the assumptions of growth. They were assumptions which allowed not only those in my field, history, to use the past as a guide but to suggest that there is importance to learning it . . . the assumption of abundance which underlay the university, and society as a whole, obviously has to be reassessed, and this will need different teachings in the social sciences as well, of course, as different institutional analysis.

Dean Rostow expressed the opinion that, with the age of fossil fuels coming to an end, imaginative new curricula in the universities will be required to deal with the period ahead. The "end of growth will also mean that there will be internal reallocations on the campus, such as we already see." This is not as "unusual a period as it would seem to be if we had no sense of the past," she added, and economic historians, political scientists, and institutional researchers with such a sense are needed.

The universities have not yet decided what to do about the new agenda, Dean Rostow mused. They are, as a first step, involved in the "iterative exercise" of maintaining their status quo, she said.

> Then, stage two is the act of desperation—cut down by "X" percent the faculties not earning their keep; reverse the tenure of protection which faculty members have so jealously sought and preserved over the years; move in the direction of new and innovative experiences; reach out into the community; bring in mid-career people; innovate in as many directions as possible; give much more to those departments in colleges and schools which are burgeoning; worry little about the others.
>
> I put it to you that all of these are make-shift, short-run solutions at a time when we really don't know what the curriculum is doing to meet the problems of this period of the new agenda, and I put it to you, also, that the universities are operating off a rather stale body of essential information in many of their departments . . . I read that the problem of the shrinking pie is one with which you (institutional researchers) must deal steadily. Again, I put it to you that a shrinking pie is a stale pie.

The speaker cited three revolutions in higher education—the first taking place at the end of the nineteenth century when our universities imported the "techniques of higher learning" from the Germans; the second coming "when John Dewey and company had sufficient impact on the universities to unstifle the curriculum"; and the third arriving with the computer. And then she called for a new—a fourth—revolution. She said:

> All of these changes have taken place with too little attention paid to the direction of higher education in general. What is it we are trying to produce that is so important as to involve the energies of so many of us? I think that the university, above all, has been a functional institution in this country. We have used education to serve a general or public need. I think of education as a whole as one of the major social escalators from the beginning of American history. The other escalators are, of course, income, and, really, the political process. We have used education, then, as a mechanism for social change, and, on the whole in the past, this has been effective. Are we doing all that we can to utilize the resources of higher education at this time of new direction, at this time of clearly new agenda in terms of overall American public policy?
>
> . . . the university, on the whole, reflects an artificial division into segments no longer applicable to the problems of the late twentieth century. Can you think of a major policy issue that can be solved within a single department of a university? I can't.

Such issues as energy, inflation, and peace require either a multidisciplinary or an interdisciplinary approach, she stated. She proposed that on each campus " . . . those engaged in the vital and significant exercise of looking at the abacus and coming up with the proper answer be as concerned with talking with the faculties about the need

for new overall university directions as, perhaps, was the case when we moved, now 100 years ago, in the direction of the graduate school, the seminar, and the Ph.D."

It is time for that sort of team approach on the campus, Dean Rostow said, because, in a sense, time is running out. She cited polls which show those in education not as unpopular as members of Congress but "moving in that general direction."

> . . . On the question, Whom do you trust—obviously, you don't (according to the respondents to innumerable polls) . . . trust the president, you don't trust congress, you don't even trust the courts. You don't trust your doctors any longer, which is a depressing fact. There is . . . but . . . one person who is trusted in this country . . . Walter Cronkite. This is true; I am not hypothecating. At such a moment, then, the American University is in need of this fourth revolution . . .

Mrs. Rostow went on to say,

> . . . the fourth revolution in higher education has to be led by some force . . . the 1970s is, indeed, one of those turning points in history where, if we take the opportunity of bringing back a coherent and interacting university campus, there are [productive] directions in which we can go, but we cannot do it in a split, bifurcated, and somewhat hostile division between those who teach and those who look at the terminals, between those who worry about students as individuals and troubled human beings and those who can quantify [students'] troubles and . . . problems and look at them, in that sense, through the eye of the terminal.
>
> . . . I think a country which has gone through what we have gone through since World War II and demonstrated the stability of its institutions is in pretty good shape to look at the world of no growth, to look at the world of straightened resources, and to realize that we have within us the resilience to plot the course of the universities of the future . . . The shape of the university will never be a single pattern because the diversity of American education has, of course, been it's strength. We do not want a homogenized set of universities—not even public universities. We certainly don't want homogenized private institutions . . .

Referring to the title of her address, Some Thoughts on the Lower Profile of Higher Learning, Dean Rostow said, ". . . higher education at the present time is, indeed, playing a game . . . of maintaining a low profile. We know that if we raise our heads somebody might throw something at us as, indeed, they did in the end of the 1960s." She said that the lower profile of higher learning need not last long if universities begin to deal with the agenda items—energy, inflation, peace, the cities—but "we are required, if we take our tasks seriously, to make sure that the older disciplines are not lost because of a lack of capacity to speak in other languages, the lack of a capacity to use ideas, and, above all, the lack of capacity to use language . . ." She continued:

> The preservation of the old . . . is vital at a time when you cannot defend these courses in quantitative terms. You cannot defend in linguistics the small classes that must be held; you cannot defend in literature the seminars which are essential to the preservation not only of the art of the understanding of literature but also of culture. The delicate act, then, of preserving the old is one that faculties talk about on their own but rarely discuss with offices of institutional analysis.
>
> In my projection of the need for the new revolution, there must be a shared projection as to how we can make sure that these islands of excellence which are the heart of the university experience can be twined into the interdisciplinary, multidisciplinary approaches to the key problems of the world into which the

graduates of these universities are going. It is, in short, a challenge which, for once, should not be very expensive in dollar terms but extremely costly in human energy. It is a task in which everyone in a university is, in one sense or another, involved, and it is a task which (as with all good tasks) is one in which there is no easy answer in the back of the book . . .

Dean Rostow concluded her address with reference to Toynbee's observation that those civilizations with too easy answers are "not societies which will stretch themselves to make sure they survive." She suggested that higher education is in a survival mode in the Darwinian sense and must adapt to its environment or be replaced by another species more adapted to modern times and places.

# SOME REFLECTIONS ON THE CURRENT POSITION AND FUTURE OUTLOOK OF AMERICAN HIGHER EDUCATION

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Throughout American history, public attitudes toward education have been ambivalent. On the one hand, education has been seen as the way to a good life and the foundation of a democratic society. The founding fathers believed that if power were to reside in the people, the people—not only the leaders but the rank and file—must be capable of understanding complex public issues and must have a sense of responsibility for public welfare. They also believed that if the economy—and with it the national power—were to advance, the labor force must be broadly educated as well as trained for specialized vocations in an advancing technology. And they believed that if human life were to be worth living, each person must be encouraged and helped to develop intellectually and morally to the full extent of his or her capacities. These beliefs have always had strong support. On the other hand, an anti-intellectualism—a distrust of education and educated people—has always been present in American society. The relative strength of these two attitudes has fluctuated over time, in a sort of manic-depressive cycle, and the fortunes of higher education have varied accordingly.

Following World War II, the nation entered a manic phase which lasted through most of the 1960s. During this time, higher education was seen as the key to individual opportunity, social advancement, and world power. As a result, it attained a wholly new level of financial support and expanded to a previously unheard of scale of operation. But following the late 1960s, we entered the depressive phase of the cycle. People began to sense that higher education had not brought on the milennium and had not solved all the problems of individuals or of society. They were upset about the student unrest of the 1960s. They became concerned as to whether we were trying to educate more students than were qualified for college work, they questioned whether the labor market could supply enough jobs for all college graduates, and they worried about the ever-increasing cost of the higher educational establishment.

These doubts were reinforced by a series of influential books and articles with rather flamboyant titles, among them, Paul Goodman's *Compulsory Miseducation* (1964); Ivar Berg's *Education and Jobs: The Great Training Robbery* (1970); Ivan Illich's *Deschooling Society* (1972); Kenneth Arrow's "Higher Education as a Filter" (1973); Caroline Bird's *The Case Against College* (1975); James O'Toole's "The Reserve Army of the Underemployed" (1975); Lester Thurow's *Generating Inequality* (1975); and, to cap off this list, Richard Freeman's *The Overeducated American* (1976). Without exception, beneath these sensational titles were useful as

well as provocative discussions. American higher education faces real problems, and it can benefit from constructive criticism. However, the recent public discussion of higher education, and much of the writing, has been one-sided and has helped to produce the rather depressive atmosphere in which our colleges and universities have been operating in recent years.

I believe the time has come for the nation to make a new and more balanced appraisal of the place of higher education in our society. In my remarks today, I shall offer some comments that will, I hope, lend perspective to the current and future position of higher education.

**Outcomes**

To begin, I shall comment on the actual outcomes of American higher education. My remarks will be based on my recent book, *Investment in Learning* (Bowen, 1977), in which I tried to answer the question: What do the American people get for the $85 billions a year they spend directly or indirectly on higher education? I shall not read the book to you but simply summarize the conclusions very succinctly. In looking at the outcomes for individual students, I found not that college education produces miracles or performs conversions but rather that it operates on many dimensions of human personality and that its impact comes from the accumulation of a multitude of small effects. Students on the average do gain in verbal skills and in substantive learning, they become more rational in their approach to issues, and they make progress in lifelong learning. They become more tolerant. There is a general freeing of the personality, an increased openness to the new, a willingness to search and experiment, a breaking away from convention and tradition, and a raising of aspirations.

In practical affairs, college quite clearly enhances people's economic productivity. Politically, college-educated people are definitely more informed and more involved. The faith of the founding fathers in education was not misplaced. One of the most far-reaching effects of higher education is in the domain of child care. In many ways, college-educated people—both men and women—tend to be more attentive to the health, education, and personal development of their children than are other parents. And the results show up in the performance and behavior of the children. This I would rate as one of the most specific and important outcomes of higher education because each generation's education is carried on through future generations.

In addition to the many effects of college upon individual students, higher education has enormous impacts, or potential impacts, upon society. These come about partly through the presence in society of an educated populace, partly through the research and scholarship that is conducted in higher education, and partly through indirect effects upon the distribution of income. The basic scientific research performed in colleges and universities is probably, by itself, of sufficient value to justify the entire higher educational enterprise. Also, society gains enormously from the presence in our colleges and universities of a large and diversified reserve of specialized experts who are available to serve society in many ways—from manning the cabinet and the upper reaches of the civil service to advising government, business, foundations, and other organizations on particular issues and problems. Society also depends heavily upon higher education for the preservation of the cultural heritage and its interpretation to each new generation. Our colleges and universities are major centers for philosophical and religious inquiry; they are an independent source of social criticism and public policy analysis and are important centers for the cultivation of literature and the fine arts.

When all the many outcomes are added up, it becomes obvious that the numerous contributions of the higher educational system are worth several times what they cost. The narrow economic returns to instruction alone are sufficient to offset all the costs; the scientific research is also, by itself, sufficient to justify the costs; when the many non-monetary returns are added, the total return greatly exceeds the cost. Though not every institution carries its full weight and not every student is served as well as he or she should be, yet, overall, educators do not have to apologize for the results they achieve. Higher education is clearly well worth the resources it uses. We have a good product—not perhaps the best product of which we are capable, but good nevertheless.

**Public Attitudes toward Higher Education**

It is often alleged that the public has become disenchanted with higher education. As I have indicated, attitudes toward higher education are less enthusiastic than they were in the 1950s and early 1960s. But to say that they are strongly negative is simply not true. Study after study shows that both students in course and alumni are very appreciative of their college experience, and a great majority express satisfaction. Similarly, a large majority of the general public expresses favorable attitudes toward higher education. Parents, in particular, indicate overwhelmingly that they hope and expect that their sons and daughters will attend college. Also, in the periodic surveys in which people are asked to indicate the degree of their trust in various leadership groups, college and university educators always show up at or near the top. Moreover, higher education for adults beyond the college age is growing rapidly, especially among those who have already been to college. Education appears to be addictive.

**Financial Trends**

Society has also expressed its faith in higher education through its willingness to finance it generously. During the "golden years" of the 1950s and 1960s, the revenues of higher education rose dramatically. Between 1949–1950 and 1969–70, for example, revenues in constant dollars increased six-fold or at the annual rate of 9.3 percent. Since 1969–70 this growth has leveled off to 5 or 6 percent a year, but that is still substantial. Even on a per-student basis, constant dollar revenues have been increasing at the rate of 1.5 percent since 1969–70. This record is in sharp contrast to the experience in earlier periods of inflation when revenues always fell off drastically. The fact that, in recent years, funds in real terms have held up despite inflation is an indication that higher education is still highly valued both by those who pay tuitions and by those who control appropriations. As a result, faculty and staff salaries have nearly kept pace with inflation, serious institutional retrenchment has been avoided, and educational quality has not deteriorated. I am not saying that the financial position is satisfactory. There is some deferred maintenance, library acquisitions have slowed up, and faculty and staff salaries are not staying abreast of compensation in the economy generally even though they are nearly keeping up with the cost of living. Moreover, tight finances may be inhibiting institutional innovation and development. But the financial situation can in no sense be described as catastrophic, at least not yet.

**The Private Sector**

Let me now comment on the private sector of higher education. There has been a widespread belief that private colleges or universities have been, or are soon to be, in serious financial trouble and that mortality among them has been, or soon will be,

high. Dr. John Minter and I (Minter and Bowen, 1977) have been conducting annual surveys of the private sector for four years based on a sample of 100 representative institutions throughout the country. Our surveys show that the financial position of the private sector has been holding remarkably steady. Assets and net worth have grown, debt is being paid off, and few institutions have experienced chronic deficits. Revenues have about kept pace with the combined effect of inflation and enrollment growth—except in the one year 1974–75 which was at the peak of the recent inflation. Even in that year, considering the circumstances, performance was remarkably good. Total revenues increased by 10 percent, while the consumer price index rose by 11 percent and enrollment grew by 1 percent. On the whole, the leaders of most institutions have maintained their poise and morale, and they express cautious confidence about the future. Most institutions have not been forced by financial stringency into drastic retrenchment, though most have experienced tight budgets. On the matter of retrenchment, Dr. Minter and I made a special effort to identify significant cutbacks in program or dilution of quality. We were able to find very little of either; instead, we found expansion of program and improvement of quality to be more general. The competition for students has become more intense year by year. However, enrollments have been maintained and the academic ability of students, as measured by test scores and rank in high school class, has held steady (though both private and public institutions complain about the deteriorating academic preparation of students). The mix of students has been slowly changing—with more graduate, professional, and part-time adult students—and that is not necessarily bad.

I have so far been commenting on the consolidated performance of the private sector. We also examined our sample of institutions one-by-one to find out how many might be in distress. Each year we found that about one-fifth to one-fourth appeared to be losing ground financially. However, from year to year we found no great change in this number and, more remarkably, we discovered that the list of institutions in distress changed substantially. We found that when colleges are headed for financial trouble they take drastic steps to correct the problem. They change administrative officers, they strengthen student recruiting and fund raising, they cut unnecessary costs, and so forth. During the four years of our study, not a single institution in our sample has disappeared. Indeed, it turns out that the whole population of private institutions is greater today than it was in 1969–70 at the heyday of academic prosperity.

To summarize, we found that most private colleges and universities are solvent even though not highly prosperous. Their staying power is impressive. Private institutions have a strong will to live.

So far my remarks have had a mildly optimistic glow. I would like now to turn to three potential problems that are immediate or lie just over the horizon and that are of great concern to educators.

**Endowments and Philanthropy**

The first problem concerns the future of income from endowments and gifts. These are of special concern to private institutions but affect increasing numbers of public institutions as well. Rapid inflation tends to erode the value of endowments because it is difficult to make capital funds grow fast enough to keep pace with rising costs of education. Closely related is the poor performance of the stock market which has not only eroded the capital value of endowments but has been discouraging to donors who do not wish to make gifts of stocks at depressed values. Also, to make matters worse, there is intermittent agitation to change the tax laws in

ways that would reduce incentives for charitable giving of securities, real estate, objects of art, and other assets. So far, however, these efforts have been largely fended off.

**Rising Costs**

The second problem is constantly rising costs. These cost increases are partly due to inflation, and everyone is familiar with that. They are also due to socially mandated expenditures which raise the cost of doing education business. Examples are increasing social security taxes, affirmative action, women's intercollegiate athletics, provision for the handicapped, legislation on occupational safety and health (OSHA), new retirement rules (ERISA), cost-sharing provisions in governmental research contracts, stricter building codes, new procedural requirements in dealing with faculty and staff, the Buckley Amendment on privacy of student records, environmental legislation, and increased costs for campus security. Even the rise in outlays for energy may be considered in part to be socially imposed. Also, the explosion of knowledge and information has brought about increasing costs to acquire more books and periodicals and new equipment such as computers, electron microscopes, and nuclear accelerators. All organizations—business firms, hospitals, and governmental agencies—are subject to rising costs from inflation and socially imposed expenditures. Higher education is no exception. However, the burden on higher education may be unusually onerous partly because the number of such costs has been relatively heavy and because of the special difficulty of financing these costs through increased appropriations, tuitions, gifts, and other revenue sources, and partly because higher education cannot use them as tax write-offs. Over time, however, higher education has succeeded reasonably well in shifting these costs to students, taxpayers, and donors, though many educators believe some of them have come out of the hides of the institutions in the form of impaired quality of performance.

**The Job Market**

The third problem relates to the job market for educated people. It is often asserted that American higher education is overexpanded in the sense that it is educating more people than can obtain jobs of the kind usually associated with college-educated people. And the inference drawn from this premise is that higher education should no longer expand—or, even, that it should contract. The whole subject of education and jobs is complicated and controversial. I can only touch the high spots.

To begin, this is no new subject. For decades it has been asserted that higher education is overexpanded. For example, Seymour Harris (1948), a distinguished Harvard economist, wrote a book in which he warned that higher education was outrunning the labor market. As it turned out, the book appeared at the beginning of the strongest job market for college graduates in history.

Let me now cite some simple facts that bear upon the job question. There is no doubt that the job market for college-educated people has softened in recent years. But these years have been unusual in that the labor market has had to absorb unprecedented numbers of new workers. Not only have women been rushing into the labor market at a record rate but, at the same time, the post-war babies, now grown, have been entering the labor market in hordes. But at the very time that millions of new workers have been seeking jobs, the economy has been soft. This combination of circumstances has, of course, created labor market congestion. But these circumstances are not necessarily permanent. The entry of women will

eventually level off as most of them become employed workers, and the sharply declining birth rate of the 1960s will be reflected in a reduced number of young labor force entrants in the 1980s. Indeed, the armed services are already concerned about the supply of personnel in the 1980s; the decision to use women in combat positions has been dictated partly by the impending shortage of men. It is astonishing that the economy has performed so well considering the need to assimilate so many new people. The number of jobs in the economy increased from 78.6 millions in 1970 to 90.5 millions in 1977, an increase of 11.9 millions. It was reported just the other day that employment is up sharply in 1978 and, also, that job prospects for college graduates have improved. Moreover, though overall unemployment rates have been disturbingly high, unemployment among college-educated people has been much less than that among those less educated. This difference applies to young as well as to older people. For example, a recent study shows that the unemployment rate among young college graduates was 5 percent as compared with 10 percent for high school graduates and 19 percent for high school dropouts (Bowen, 1977, p. 168).

In judging employment opportunities, there is a widespread tendency to assume that the economy will never change, that the inventory of jobs it now provides will continue indefinitely into the future. Past history tells us that this is not so. For example, in 1900, two-thirds of the labor force were employed in goods production (agriculture, mining, and manufacturing) and one-third in services. Today these percentages have been reversed, with only about one-third in goods production and two-thirds in services. Similarly, in 1900 about a tenth of the labor force were engaged in professional, technical, and executive work; today nearly a quarter are so engaged. Enormous changes such as these come about partly because of technological advancement, partly because of changes in consumer choices, and partly because of changes in the kinds of work people are prepared to do and want to do. Employers adjust their jobs to the kinds of workers available just as workers adjust to the jobs employers provide. There is an interaction between the workers and the employers that brings about great changes in the labor market over time. The job patterns in a society with large numbers of educated people will be quite different from those in a society with few educated people.

Another fact of importance in appraising the job market is that college graduates make up only about 14 percent of the adult population. The common idea that we are an overeducated society is clearly not correct. It is true that this percentage is rising, but even by 1990, according to census projections, the percentage of the population with college degrees will reach only 18 to 20, fewer than the percentage now in technical, professional, and executive jobs (U.S. Bureau of the Census, 1976, p. 124).

When one looks to the future demand for college-educated people, one must consider what the nation will be doing. The demands will be different depending on whether we are at war or peace, whether we are exploring space, the ocean floor and the interior of the earth, whether we adopt universal health insurance, whether we try to clean up the environment, whether we try to improve our schools and our provision for early childhood education, whether we face up to our urban problems or continue to neglect them, whether we try to develop our energy resources, whether we become more deeply involved in problems of the third-world, etc. For example, just a few months ago, President Carter signed a bill calling for energy research and development at the rate of $6 billions a year, and already there has been a noticeable effect on the demand for scientists and engineers. One factor in decisions on the agenda of the nation will be the availability of people with the

necessary skills and motivations. Their availability will determine what is possible and also will influence the relevant political decisions.

So far in my comments on the job market, I have considered the demand for jobs of the kind ordinarily associated with college education. But suppose, despite all the considerations I have offered, the number of college graduates should greatly exceed the number of available white-collar jobs of the kind conventionally assigned to college-educated people. What then?

The task of colleges and universities is primarily to produce educated people and only secondarily to produce trained manpower for the economy. It is a moral obligation of the nation to provide genuine opportunity and strong encouragement for all citizens to develop themselves as persons to the full extent of their capacities regardless of the job market. To keep people ignorant on the ground that the economy does not provide enough suitable jobs would be morally intolerable. As Carlyle said, "That there should one man die ignorant who had the capacity to learn, this I call a tragedy. To impart the gift of thinking to those who cannot think, and yet who could in that case think: this one would imagine, was the first function a government had to set about discharging." Yet the number of persons in our society who are or could be educable at the college level greatly exceeds the number now attending. Over time, with a rising standard of living and the spread of elementary and secondary education, the number of persons educable at the college level will increase still more. Today, there are nearly a million fewer women than men in college, the percentage of young people attending is half in some states what it is in others, low-income people are clearly underrepresented (though less so than a few years ago) and the potential number of adult learners vastly exceeds the number now enrolled. On moral grounds, the chance for higher education should be opened up to millions of people in the decades ahead. As Lawrence Cremin (1965) has suggested, the foreseeable future may be the first time since the dawn of civilization when appreciable cultural advantages could be conferred on a substantial proportion of the whole population. But in thinking these expansive thoughts we must ask: Would it be so bad if people who do manual work were well educated or, conversely, if well-educated people engaged in blue-collar occupations? My answer to these questions is no; it would not be so bad. But I think that in the long run the moral imperative of spreading learning to all is congruent with the long-run manpower and womanpower needs of the nation.

**Demography**

The fourth problem which agitates many discussions of the future of igher education is the impending decline in the number of young people of con tional college age. We are just now, in 1978, reaching a peak in the number of 18-year-olds. The decline will be slow until 1982 and will then accelerate. Around 1990, the number is expected to rise again, though what happens then is conjectural. At the low point in the 1980s, the number of 18-year-olds will be about 73 percent of the number in 1978 or 1979. On the basis of these figures, some observers are predicting average enrollment declines of about one-fourth. They may be right. I do not intend to get into the game of making long-range enrollment predictions. I would, however, point out that such a drop in enrollment is not preordained. What happens depends on the policies we as a nation adopt. As I pointed out, there are fewer women than men and fewer poor than well-to-do people in college today; in some states attendance is far less than in others; and demand for adult education appears to be potentially enormous and has, in fact, been growing rapidly in recent years. In the next couple of decades, the actual enrollments conceivably could

increase substantially over what they are today. What actually happens depends on the kinds of education offered, on the convenience of time and place, on the level of tuitions and fees, on the forms and amounts of student aid, and on the cooperation and support of employers. It also depends on the reaction of the nation should idle capacity in the higher educational system develop. Will the nation view idle capacity as an opportunity to get on with the educational work that is so urgently needed in our society, or will it simply close down the idle capacity? I do not know the answer. My personal opinion is that any idle capacity should be viewed as an opportunity for new and better service rather than as an unwanted redundancy.

As a footnote to my remarks on the demographic outlook, I should mention that in two major midwestern states, independent studies of the enrollment outlook by distinguished and responsible experts conclude that there will be no significant decline in enrollments for the rest of the century. These studies take into account the fact that the student population today does not consist primarily of 18-year-olds but is much older than in the past. When this fact and certain other new variables are considered, the future enrollment trend in these states becomes stable or slightly upward.

**Conclusions**

The thrust of my remarks has been that the American system of higher education is robust, vigorous, productive, and useful and that it has much work to do in the future. When compared with other social institutions such as business, government, the schools, the church, and the family, higher education is performing well and deserves support. But I would not want to leave you with the impression that I think it is perfect or even as good as it should be. I subscribe to the view of Maurice Mandelbaum (1978) who recently said that he knew of "no college or university which has the right to be complacent, which does not stand in need of one or another sort of reform." In my opinion, many of the institutions are too large and impersonal; many are not providing adequate extracurricular services for the growing numbers of commuter students; many institutions are fragmented into numerous narrow specialities and are neglecting liberal education and also not mobilizing their resources for attack on the great problems of our time; in some cases, standards are being weakened, one evidence being the almost universal grade inflation; many institutions lack the ability to respond flexibly to changing conditions and changing societal needs; many institutions neglect to evaluate their outcomes and, hence, manage their affairs without knowledge of results. I could go on identifying what I regard as warts, wrinkles, and even diseases of higher education. Indeed, a few institutions may even border on the fraudulent. But steps are being taken to correct many of these problems. The kinds of discussion taking place at this very meeting are good evidence that people are aware of problems and trying to do something about them. Overall, the evidence is overwhelming that American higher education is a thriving industry with a potentially bright, even though uncertain, future.

In closing, I should like to comment on optimism in higher education. In general, my view has been not that a bright future for higher education is a certainty but that the range of possibilities is very wide and that among these possibilities is a future characterized by growth, increasing effectiveness, and an important role in the advancement of civilization. The endemic pessimism among educators has a self-fulfilling quality about it, because it tends to suppress innovation, and risk-taking, and tends to present to the public a posture of defensiveness rather than a hopeful outlook that includes positive and imaginative possibilities and plans for the future.

Recently, I have noted perceptible indications of change in the outlook of educators. I hope these indications are the beginning of a groundswell toward more positive thinking.

David Riesman (1977–78), who has long had a pessimistic outlook on higher education, has conceded that his "gloomy prophecies" of ten years ago "have been only marginally fulfilled" . . . He goes on to say that the current state of our major higher education institutions perhaps indicates an increasingly inhospitable environment; but that on a "day-to-day basis the querulousnesses widely prevalent in academia are rather like the complaints of a spoiled heir on a plateau of affluence."

Burton Wheeler, dean of sciences and arts at Washington University, in a recent address, expressed the same thought:

> We maintain a pretense that we take satisfaction in our work only grudgingly, that we suffer from the slings and arrows of outrageous fortune, that we are victimized by hostile forces. By maintaining this posture, students and faculty alike feed on their discontents. My contention is that we have affected this style of behavior because we find it safer than exposing our fragile hopes to what we fear are hostile critics. We have lost sight of the possibility that this behavior, in part at least pretense, may become habitual, quenching the springs of hope that can make the academic community a more viable setting for promoting discovery and opportunities for personal fufillment.

To conclude, I have tried to review the state of higher education today. I have indicated that the higher educational system is not the weak, declining, moribund, defeated industry it is often painted. It is not necessarily headed for a miserable and feeble future. There is still opportunity and there is still demand for imaginative and vigorous leadership and entrepreneurship. And, in my opinion, there is also still room for the small college that can adjust and grow with the times.

## References


Arrow, Kenneth. Higher education as a filter. *Journal of Public Economics*, 1973, *2*, 193–216.

Berg, Ivar. *Education and jobs: The great training robbery*. New York: Praeger Publishers, 1970. (Published for the Center for Urban Education.)

Bird, Caroline. *The case against college*. New York: D. McKay Co., 1975.

Bowen, Howard R. *Investment in learning*. San Francisco: Jossey-Bass Publishers, 1977.

Bowen, Howard R. and Minter, John. *Financial and educational trends in the independent sector of American higher education*. Washington, D.C.: Association of American Colleges, 1977.

Cremin, Lawrence. *The genius of American education*. Pittsburgh: University of Pittsburgh Press, 1965.

Freeman, Richard B. *The overeducated American*. New York: Academic Press, 1976.

Goodman, Paul. *Compulsory miseducation*. New York: Vintage Books, 1964.

Harris, Seymour E. *The market for college graduates*. Cambridge: Harvard University Press, 1949.

Illich, Ivan. *Deschooling society*. New York: Harper & Row, 1972.

Mandelbaum, Maurice. Address delivered at a conference held at the Graduate School of the University of Michigan, April 13–15, 1978.

O'Toole, James. The reserve army of the underemployed. *Change*, 1975, *7*, 26–33.

Riesman, David. Article. London Times Higher Education Supplement. 1977–78 period.

Thurow, Lester. *Generating inequality*. New York: Basic Books, 1975.

U.S. Bureau of the Census. *Statistical abstract of the United States*. Washington, D.C.: U.S. Government Printing Office, 1976.

## THE UNEASY ALLIANCE: THE STATE OF GOVERNMENT-UNIVERSITY RELATIONS

*A summary report, with excerpts, of an informal address by*
*Jack W. Peltason*
*President, The American Council on Education*

In addressing the Wednesday morning general session of the Forum, Jack Peltason directed his remarks to the intrusion of government—particularly the federal government—into the affairs of the university. He commented,

> Right behind their major problems of energy, enrollment, medical schools, hospitals, and intercollegiate athletics comes that perennial concern and apprehension about the relationship between the university and government—most especially, but not exclusively, the federal government.
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> It is a growing concern; it is a preoccupation, it is what they (university presidents and vice presidents) talk about in public and what they talk about when they are together with one another. It applies . . . to private institutions as well as public institutions. . . . Why are they so concerned? . . . What do they [feel] is being endangered?

After commenting on the uniqueness in the world of "this rather unusual system", which the United States has had for only "some eighty-odd years" and which we tend to think of as natural, Mr. Peltason emphasized the minimal role once played by government in the operation of university affairs: First, he said,

> . . . postsecondary education is a state and not a federal responsibility. . . . The assumption is that the federal government has a very minimal role, and in the past, it was there very apologetically in very restricted circumstances. The commissioner of education was deliberately kept as an office to collect information and statistics, but the admissions, what was to be taught, the curriculum, the research goals, how to account for funds—all of these were thought to be totally outside the scope of federal responsibility. If there was to be regulation, it was to be at the state level. National uniformity was not thought to be a virtue but a vice.

A second historical factor, he said, was the difference between public and private universities—"a difference with a distinction; a distinction with a difference. . . . one that we took pride in." States, he said,

> were supposed to leave the private institutions alone. . . . Private institutions did not want nor seek public dollars. . . . Of course, both private and public institutions were socially responsible, but they were to serve society in different roles. Private donors gave their money to the private institutions which had no particular obligation to serve the public. The public's more immediate needs were to be served by the public institutions.
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> Private institutions [tended to be] more selective in admissions, serving specialized clientele. They were frequently created for that purpose—to provide

education for women, to provide education for people of a particular religious orientation. One did not apologize for the fact that the private institution had a specialized mission.

A third feature of the system, he said, was the diversity of institution type beyond the question of public or private—religiously oriented; two-year schools and four-year schools; schools with research or liberal arts missions—all of which "were thought to be within the club."

The development of a governance structure in this country, Peltason said, featured "lay boards deliberately designed not to be representative of the internal constituencies of universities. . . . [The lay board] was to be connected with the internal group by the president. He recalled,

> Even in my short career, I can remember that a faculty committee made a recommendation that a group of faculty should meet with the trustees, and the president threatened to resign. The notion was totally foreign that there should be direct communication between that board and the internal constituencies. . . . The fact that it was a public institution did not mean that it was to be a part of the governance structure of the state. . . . Separate personnel systems still persist, and many faculty . . . and staff members of the university somewhat resent the suggestion that they are "state employees".

Dr. Peltason continued: "In some states, we had constitutional independence. Beyond that, nonpartisanship was the mode. Great care was taken both in law and in practice to keep politics out of the university." Although governors could change their cabinets upon assuming power, "they were not supposed to tamper with the university." Nor was the legislature to interfere, he said. There was "kind of a deal worked out—the government would stay out of education, and education would stay out of government. 'We'll pursue the truth; you pursue power.'" And so, he said, "there developed internal machinery appropriate for truth seekers but not for power seekers. . . . Now that is, in broad outline, our system. How it is being modified is rather obvious, why it is being modified is more difficult, and what to do about it—[that] is the most difficult of all."

Although "the federal government is on the premises in a big way," Peltason continued, "the subsidization of education . . . by the state, and by private resources, still exceeds that of the federal government." Even so, he said, depending on how you add it, the federal government provides $8 billion of the $40 billion needed for higher education and "its controls are there . . . there are four types" [of control]:

1. *That funds are spent for the purposes for which they were granted.* The problem here, he said, relates to the need for administrators "who understand that universities, although not immune from financial accountability, are different kinds of institutions with different purposes from, let's say, an aircraft manufacturer."

2. *That dollars are not spent in violation of constitutional standards (for example, with regard to religious separation, race, or sex).* "I need not tell you," Peltason continued, "that there are plenty of problems in the area but, again, the objection is not to the principle but to the effectiveness."

3. *Those federal controls, added to the federal dollars, that really have little to do with the purposes for which the money was appropriated.* "All you have to do," he said, "is identify an evil, and then somebody says, "Let's stop it" . . . Somebody said that there were some troubles out there; some students' records were not being properly kept, so the next thing we had was the Buckley Amendment—a lot of regulation and counterregulation and amendment. It's not now too burdensome, but nonetheless, it is kind of a federal crime for a professor to post the grades in the wrong

way." Rather than debating the whole notion of what the government is doing here in the first place, Peltason continued, we find ourselves debating the *details* of the regulation.

4. *Regulations that Congress passes which are not aimed at universities but into which universities are incorporated because Congress is unaware of "our special mission and our special nature."* Dr. Peltason cited an example from the last session:

> The pressures to expand retirement age from 64 to 70 were not designed to do something about universities. They grew out of certain social pressures in the economy and society, but their effect was to rivet upon universities an inflexible retirement standard which once more deprived governing boards of responsibility for an item [over] which they previously had control . . .

And further, he said,

> I needn't again dwell upon the court's intervention . . . just three decades ago any assumption that they [state and federal judges] would entertain suits by students claiming they had been improperly dismissed from the university, or that the dean had improperly disciplined them, or the teacher improperly graded them, or that the coach had improperly bawled them out would have been thrown out of court. Today, you can find a judge, [without] too much trouble, who will be glad to review any decision at any university on any of these matters.

The speaker continued:

> Why have we moved, why are we here where the assumption that the university autonomy—which at one time went along with free speech and motherhood, a noble ideal, something to be honored—is now, all of a sudden, thought to be like states' rights, the refuge behind which scoundrels are hiding trying to escape detection. Let's not exaggerate. The problem is real, but the American universities still remain among the freest, most independent from direct political control of any universities in the world. We retain a central core intact. Professors are still not chosen for partisan or political reasons; students are not admitted or excluded because of external political pressures; the classroom *is* protected from external interference; and research scholars are free to pick their problems and to investigate them with relatively few controls.
>
> The concern is, however, that we seem to have lost the rationale for these things and, if the trend continues, that we might lose something here that none of us wants to lose. I think the tragedy is that it is happening without anybody intending it to happen and is the [unanticipated] result . . . of a series of small moves, each, by itself, well justified and understandable but, cumulatively, gradually eroding the breathing space in which education and scholarship thrive and in which critical thinking is most likely to take place.

"Let me see if I can briefly identify why I think some things are occurring and what we can do about them," Peltason said:

> One, we fail to articulate the argument in behalf of university autonomy. We take it for granted. We think that most people understand it. We think that the values that are served by individual autonomy and pluralism are so pervasively understood by the rest of society that we need not get up and articulate them. But I am afraid that is not the case. . . . We tend to talk about university autonomy only when we are under attack on a specific thing, and then it is thought to be nothing but a rationalization. . . .

"Another reason is that when we *have* tried to defend the independence of the university, we have done it in such an extreme fashion that we have antagonized more

people than we have persuaded. . . . If some universities continue to insist that they have no responsibility whatsoever to account for the dollars," Peltason said, "to explain how faculty members work . . . or to justify anything," they will provoke an extreme reaction from government which will say, in effect, "We will really show *you* who is putting up the money." He went on,

> A third reason that we are being regulated, not, as I said, with animosity against us, is because of other social movements calling for public regulation. There is just so much regulation and government around that we are going to get more of it in the future than we did in the past. Higher education costs more, becomes more important. In part, the attention to us is a reflection of our success. . . .
>
> Then, there is government regulation because of failure to get our own house in order. Self-regulation has been talked about, but there has been very little of it. I believe that the next step is that we must strengthen the processes that we already have to show that we don't need federal regulations to deal with students honorably and fairly, that we can properly allocate funds to be spent for research. (I would match the universities' efficiency and honesty in the handling of those dollars against almost any other example I can think of in society. We have done an outstanding job of administering research contracts. Society has received what it paid for and has received it honestly and effectively.)

Other government controls, according to Peltason, stem from the opening up of internal university policy making to "many groups who are not there because of any qualifications but because they are affected by university policies and programs. In effect, we have expanded lay power within the internal university." And so legislators or trustees say, "If the students [or others] can have something to say about it, why can't we?"

Finally, Peltason cautioned, "I think that we get into trouble when the United States Senate starts setting academic policy and acts as if it were the Academic Senate. We also get into trouble when the Academic Senates start thinking that they are the United States Senate and start trying to govern the country."

Dr. Peltason concluded his remarks with this observation:

> Autonomy of the university from political controls is not only appropriate for the university, it is essential. But . . . if you wish to govern, you are to be judged by different standards and guided by different rules than if you wish to teach. Whereas a professor or a student should never be subject to disability because of [his or her] views . . . those who govern us face and should face constant fear [for their jobs] if the views they espouse are unpopular. I believe firmly in tenure for faculty, but congressmen and presidents and governors and mayors and city councilmen should never be given tenure. They are not entitled to academic freedom. On the contrary, we deliberately create institutions that will insure that [these public officials] will live in constant fear that it what they say displeases us, they will lose their jobs. So, institutional autonomy and academic freedom—the indispensible conditions of the university—are inappropriate for those who seek to govern . . .
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> A university cannot have it both ways. Autonomy and independence are essential for learning, and dependence and political accountability are essential for governance. I believe that we must seek to regain understanding—both in the university and outside of it—of these basic truths.

## ROUNDTABLE—BALANCING NEEDS AND RESOURCES: A STATE PERSPECTIVE

*Bert R. Biles, Moderator, National Center for Higher Education Management Systems*
*Granville M. Sawyer, President, Texas Southern University*
*W.E. Snelson, State Senator, State of Texas*
*Theodore Nicksick, Jr., President, Wharton County Junior College*
*Kenneth Ashworth, Commissioner, Coordinating Board, Texas College and University System*

This roundtable forum reflected upon the main theme for the 1978 AIR Forum as it addressed the question of Balancing Needs and Resources. This theme represents many issues and challenges for higher education as it prepares for the 1980s, and many of these issues focus on the relationships between institutions, different sectors of higher education, and the executive and legislative branches of state government.

For example, who should supply the resources: students or state or local government? How should these resources be delivered: through student aid, subsidies to private colleges, cost- or enrollment-based formulas?

How can higher education maintain vitality and responsiveness in the face of stabilizing or declining enrollments and resources? What are the priorities and needs that higher education should prepare to address in the 1980s?

These and other issues were explored in this roundtable discussion involving a university president, an influential state senator, a president of a junior college, and the commissioner of the coordinating board of a state system.

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## Sunday, May 21

### Time Period 1 Sunday 3:00–6:00 p.m.
### Workshops

## 1-A A CRITICAL STRATEGIES WORKSHOP FOR NEWCOMERS TO INSTITUTIONAL RESEARCH

*William L. Tetlow, University of British Columbia*
*John S. Chase, Simon Fraser University*

The workshop was conducted in two sessions and was designed for newcomers to institutional research and for those who desired to obtain an overview of the range, type, and interrelationship of activities encountered in a typical IR office. No prior experience was required and no assumptions were made about the technical skills of the participants.

The first session consisted of a two-and-one-half-hour individual "in-basket" simulation exercise. Participants assumed the fictitious role of "Andy" I. Russell, Coordinator of Academic Planning at the University of North America. For each in-basket item, the participant decided upon an action to be taken, the priority of the task, and the rationale for the action and priority.

In the second session, participants were divided into small discussion groups. Experienced institutional research directors moderated these discussions concerning reactions to specific in-basket items. The discussion closed with an identification of the critical strategies to be pursued by Andy Russell during his next 6–12 months on the job.

## 1-B FOLLOW-UP: THE TEX-SIS WAY

*Jim F. Reed, Tarrant County Junior College*

The Tex-SIS follow-up system, designed specifically for utilization at the community/junior college level, is explored in this three-hour session. To an extent, the system is a student-oriented research package, complete with questionnaires and computer programs. A wide range of subject areas, within the overall context of a student follow-up management information system, are available for discussion. Documentation of the system—including questionnaires, follow-up manuals, data results, etc.—is available.

## 1-C ENROLLMENT PROJECTIONS: A MARKET ANALYSIS APPROACH

*William R. Lucas, University of Illinois*
*Paul Wing, New York State Education Department*

This workshop deals with market analysis, the third of three fundamental approaches to enrollment projections (normative, flow model, and market analysis). Rather than using the student/non-student dichotomy as the first two methods do, the market analysis approach considers the population to be composed of segments with varying propensities to consume educational services. Market analysis is flexible, accurate, and integrative, and the presenters believe that it is the most promising method for fully incorporating enrollment projections into the planning process.

## Monday, May 22

### Time Period 2 Monday 8:30–9:30 a.m.
### Special Interest Groups

## 2-A THE HIGHER EDUCATION PANEL: A COOPERATIVE VENTURE IN SURVEY RESEARCH

*Frank J. Atelsek, Chairperson, American Council on Education*
*Richard T. Sonnergren, U.S. Office of Education*
*Larry W. Lacy, National Science Foundation*

The Higher Education Panel is a continuous survey research program created in 1971 by the American Council on Education. Its purpose is to conduct limited surveys on topics of current policy interest to the higher education community and to government agencies.

The panel is a disproportionate, stratified sample of 760 colleges and universities broadly representative of the more than 3,000 institutions listed in the *Education Directory* of the National Center for Education Statistics. All institutions in this population are grouped in terms of the variables constituting the panel's stratification design, based primarily on type, control, and size.

This session briefly reviews the design and composition of the panel, including the sampling methods, the stratification design, and major operational features. In addition, sponsors of the survey system discuss their needs for and uses of the survey results.

## 2-B THE QUALITY OF FEDERAL STATISTICS ON ACADEMIC INSTITUTIONS: AN NSF/NCHEMS EVALUATION

*James W. Firnberg, Chairperson, Louisiana State University System*
*Richard M. Berry, National Science Foundation*
*Dennis P. Jones, National Center for Higher Education Management Systems*
*Frank A. Schmidtlein, Maryland State Board for Higher Education*

An evaluative effort over the past year has been conducted to assess the quality of data obtained in three National Science Foundation (NSF) annual surveys of science and engineering activities. This evaluation has been based on structured interviews of academic administrators and institutional researchers at a sample of 45 institutions, all of them major research universities. The objectives of the study are to (a) obtain information on institutional reporting practices and sources of basic record data used to complete the items on the survey forms, (b) assess the overall quality of institutional reporting, (c) use study findings to recommend improvements in survey collection instruments, methodology, and coverage, and (d) try to determine how the data could be made more useful in planning activities by university administrators, including institutional researchers.

The findings from this evaluative study serve as the basis of discussion of (a) what other national organizations, such as the National Center for Higher Education Management Systems (NCHEMS), are doing to promote quality improvements in federal statistics and (b) the need for more reliable federal data on the part of state planners.

## 2-C NORTHEAST ASSOCIATION FOR INSTITUTIONAL RESEARCH (NEAIR)

*Molly C. Broad, Chairperson, Syracuse University*

This session is an open meeting of the steering committee of NEAIR.

## 2-D CANADIAN INTEREST GROUP

*Susan Boville, Chairperson, McGill University*
*Laurence Ramesay, Université du Québec à Trois-Rivières*
*Wilfred A. Ward, McMaster University*

This session consists of two presentations. The first is entitled: From Institutional Analysis to Organizational Design: Some Elements of a Method for the Overall, Effective, and Evolutionary Planning of Contemporary Universities. It presents a number of working hypotheses, together with an indication of the various stages covered and the first results of an institutional analysis being carried out at the present time at the Université à Québec, Trois-Rivières.

This analysis concentrates on two interdependent phenomena in the institution: (1) the dialectical relationships of all kinds which characterize the internal system of the institution and its exchanges with the external system of society as a whole, and (2) the scope and orientation of the mutations introduced into these intra- and intersystemic relationships by the very process of the research which is being carried out. The working hypotheses explore these two phenomena within the environment of a university institution.

The various stages of the analysis covered so far allow one to demonstrate how specific approaches in the area of institutional research and planning can be used to interpenetrate in the course of only one process. Two problems consequently are pinpointed: (1) the transformation of cognitive elements (information and information systems) into elements of design, orientation, and creation of new institutional settings in an experimental perspective, and (2) the problems of organization and management which may hinder or restrict the movement from research to effective institutional planning.

A number of partial results of the current research project help illustrate the points of convergence and the possibilities of a synthesis between an institutional analysis and other methods which are also intermediary to knowledge and rational intervention in institutions. In conclusion, some elements of a new methodology, now being prepared, are proposed for dealing with these questions.

The second presentation is entitled: Demographic Patterns, Academic Qualifications, and University Choice Patterns of McMASTER'S Applicants. A recent study conducted at McMaster provided some useful information pertaining to McMaster's secondary school applicants for the university's high school liaison and recruitment effort. The purpose of this paper is to outline the scope and methodology of the study.

The study identifies program and university preferences of applicants who reside in McMaster's catchment area and indicates the academic standing of students attracted to McMaster. The postsecondary selections of applicants were linked to their home postal areas and secondary schools attended. In addition, the percentage of grade 13 students attracted to McMaster from its catchment area was compared to corresponding percentages for the other Ontario universities. Implications for future enrollment patterns were highlighted by combining this information with both historical and projected provincial population statistics.

## 2-E COMMUNITY COLLEGES: CAN WE SURVIVE THE DATA CRUNCH?

*Mantha Vlahos, Chairperson, Broward Community College*
*Gary A. Rice, Yakima Valley College*
*William Odom, Florida Department of Education*
*Marilyn McCoy, National Center for Higher Education Management Systems*

The growth of colleges has resulted in vast amounts of data: data for internal management operations and data to comply with national and state reporting system mandates. The office of institutional research at most institutions is saddled with the responsibility of data-keeping and numbers-counting. This is one of the most fundamental issues of institutional research.

However, the researcher is more concerned with a higher level of data manipulation: data analysis. What happens to the data from the local to the state and, finally, to the national level? Can the institutional research office—and, more importantly, the researcher—survive the data crunch? These issues and response from the local, state, and national perspectives are addressed by three persons involved with some of the most innovative approaches in the country.

## Time Period 3 Monday 9:30–10:45 a.m.
## General Session

*James W. Firnberg, Chairperson, Louisiana State University System*

### 3-A GENERAL SESSION ADDRESS

***Talent for the 1980s***
*Russell Edgerton, Executive Director, The American Association for Higher Education*

### 3-B PRESIDENTIAL ADDRESS

***If You Don't Know Where You're Going, Any Road Will Take You There***
*Warren W. Gulko, President, The Association for Institutional Research*

## Time Period 4 Monday 10:45 a.m.–12:15 p.m.
## Concurrent Sessions

### 4-A COMPARATIVE ECONOMICS AND FINANCING—AN INTERNATIONAL PERSPECTIVE

*Henry Wasser, Chairperson, City University of New York*

A survey of the literature in economics of higher education among American researchers shows heavy concentration of human capital theory and rate of return. European researchers, while contributing to human resources theory, tend to emphasize the political and sociological economy of higher education. When the concept of investment in education was first discovered in the late fifties, researchers tried to assess the profitability of this new kind of investment. But, more recently, the emphasis has been on the relation of education to income distribution. The selective annotated bibliography of more than a hundred items summarizes some key works produced during the course of the shift. Manpower planning, use of educational services, screening function of higher education, diffusion of educational opportunities, and productivity are among other aspects economists have also dealt with. There has been a considerable lag, in that decision makers in both Europe and America have not yet utilized on a large scale the material of the human capital theorists or of productivity/efficiency experts or of the equitable income distribution ideologues.

### 4-B ZERO-BASED BUDGETING—AN EXPERIENCED-BASED DISCUSSION

*Bernard S. Sheehan, Chairperson, University of Calgary*
*John A. MacFarlane, McMaster University*
*Cameron L. Fincher, University of Georgia*

Following a brief introduction to zero-based budgeting (ZBB), the panelists address their differing experiences with ZBB applications. The Georgia experience suggests ZBB may be

impractical for higher education. The budgeting cycles in most colleges and universities do not permit the kind of program planning and budget preparation implied by ZBB. The benefits of ZBB may come from concepts and principles present in other budgeting approaches. It is the working principle and not the specific technique that must be identified and applied in institutional budgeting.

The McMaster University experience is a successful use of the ZBB methodology. The presentation proceeds from an outline of the financial crisis which led to the use of the methodology and which generated the attitudes among both workers and managers that contributed to its success. The steps of the methodology are highlighted by "war stories" and anecdotes from the McMaster application. The final results are reviewed, the principal problems encountered are rehearsed, and the methodology is critiqued.

## 4-C PROGRAM EFFECTIVENESS AND RELATED COSTS (PERC): A NEW STRATEGY FOR THE PRACTICE OF INSTITUTIONAL RESEARCH

*Ernest G. Palola, Chairperson, Empire State College*
*Timothy Lehmann, Empire State College*
*Richard Debus, Empire State College*

The purposes of this session are to review the main concepts and ideas behind PERC, discuss PERC's current use by various public and private institutions, examine a sample of preliminary data on student learning and personal development outcomes, and review various administrative applications of PERC at Empire State College and elsewhere.

PERC's virtue is its ability to organize within a single framework the range of institutional research studies to answer various policy questions. Both cross-sectional and longitudinal data are employed drawn from tests, questionnaires, personal interviews, and document analysis. Policy studies cover such areas as attrition, student flow, faculty work load, role of part-time faculty, background of independent learners, "best buy" information for prospective new students, and graduate follow-up studies.

## 4-D ADULT EDUCATION

*Dennis P. Jones, Chairperson, National Center for Higher Education Management Systems*

## 4-E BALANCING NEEDS AND RESOURCES

*Robert I. Lewis II, Chairperson, Norfolk State College*

***A Conceptual Framework for Identifying and Assessing Needs in Postsecondary Education***

*Oscar T. Lenning, National Center for Higher Education Management Systems*

Most college needs assessment efforts in the past have been subjective, unsystematic, and ad hoc. A significant body of knowledge is now available, however, that can help institutions to identify and evaluate constituent needs in a much more effective manner.

Needs assessment is a viable tool for planning, but serious problems exist. For example, Scriven recently concluded that decisions based on data generated by the typical discrepancy models "are built on soluble sand," because a good definition of need is missing.

Other serious problems are: (1) the difficulty of separating real need from wants and demands, (2) the lack of valid and reliable measures and indicators of met and unmet need, (3) the difficulty of developing useful taxonomies of needs, (4) the tendency of many needs assessors to be imprecise about whose needs are of concern and to not consider different groups separately, (5) the tendency to focus on goals in needs assessment rather than to let needs data help the institution evaluate and reformulate its goals, (6) the tendency to be imprecise concerning which decision makers will use the needs data, and how, (7) the failure

to make use of relevant secondary data and to overcome the possible pitfalls inherent in such data, (8) the difficulty of integrating soft and hard data, and (9) the tendency to make decisions using oversimplified decision rules.

All of the current needs assessment models generate statements of need, and many of them rank order the identified needs. Yet hardly any of them develop diagnostic statements and inferences about need causes, which are necessary if one is to really understand the different needs and move to meet them in an optimally effective manner.

### *Balancing Computer Resources with Institutional Needs*

*Gerald W. McLaughlin, Virginia Polytechnic Institute and State University*
*James R. Montgomery, Virginia Polytechnic Institute and State University*
*Alvin W. Smith, Virginia Polytechnic Institute and State University*
*Beatrice T. Mahan, Virginia Polytechnic Institute and State University*

Over the last decade, educational institutions and agencies have grown substantially more dependent on computers. Costs have increased along with the remarkable technological advances in hardware and software. The growth in storage and computational power has been exciting, but increasing cost pressures have caused many decision makers to seek a more organized development for computer facilities. The validity of such planning depends heavily on an accurate assessment of computer needs.

The traditional forecasting procedures which use trend analyses are of limited value when assessing future computer needs. After all, prior use may be a function of equipment available rather than an indicator of the needs of users. This paper reviews ways to assess future computer needs by answering two questions: (1) Who are the major types of computer users? and (2) What will be their needs in five years?

These questions are addressed through a questionnaire used to collect data from those involved in instruction, research, and administration. Ways are suggested to categorize the existing and estimated computer usage of those engaged in these different types of uses.

The procedures developed in this paper enable an institutional researcher to estimate the need for computer resources at an institution. While this approach does not answer all questions, it provides information independent of existing facilities and their costing structure. It outlines the machine characteristics needed for the "ideal" system which can then be reviewed in terms of funding limitations. The collection procedure requires neither technical estimates from those unfamilar with computer development nor estimates about skills needed by those in other departments.

### *A Faculty Salary Resource Allocation Model for Balancing Salary Needs with Resources*

*John R. Bolte, Florida Technological University*
*Daniel R. Coleman, Florida Technological University*

The allocation of faculty salary resources among the various colleges, departments, and programs in a university is an issue which can affect the ability of the institution to develop quality programs. With a uniform distribution of salary resources across disciplines, highly competitive salaries will be possible in some areas while totally noncompetitive salaries may exist in other areas. The inability to hire quality faculty members because of low salaries or the loss of quality faculty members in the competitive marketplace can have a significant impact on program strength. If the university is to be competitive in the marketplace, it is essential that administrators identify discipline salary resource needs in terms of the existing job market and allocate salary resources accordingly.

A faculty salary resource allocation model is described which takes into account the academic marketplace when distributing salary dollars among university disciplines. The rationale for such a model is presented along with an indication of advantages and disadvantages observed when the model is used. The presentation should provide institutional research personnel with information which will enable them to determine the value and suitability of this type of faculty resource allocation model for distributing resources in their respective institutions.

## 4-F STATE-LEVEL REVIEW AND ACCOUNTABILITY

*Denis J. Curry, Chairperson, Washington Council for Postsecondary Education*

### *The Development of a State-Level System of Accountability for Higher Education*

*Adolph Katz, New Jersey Department of Higher Education*

During the past several years, interest has increased in holding educational institutions that receive public funds accountable for their activities and expenditures.

The New Jersey Department of Higher Education (DHE), working with New Jersey colleges and universities, has been developing a system of accountability for (a) fiscal accountability, (b) academic quality, and (c) institutional responsiveness to Board of Higher Education (BHE) policy.

Fiscal accountability involves the establishment of a reporting system that will accurately track the movement of funds through the entire budget and expenditure cycle.

Accountability for program quality is derived from a system of institutional self-assessment and reporting.

The process to develop institutional accountability to board policy was initiated in the 1979 fiscal year budget process when the public institutions were asked to set forth their recommendations for quantitative measures for accountability.

Subsequent activities between DHE staff and the institutions have identified a series of measures that will be used to assess institutional and system performance with respect to board policy. The measures address such issues as these: Is the level of academic achievement of the students consistent with the college's role and mission? Are students deficient in basic skills receiving proper attention? How is the college progressing with respect to equal access for women and minority students?

The accountability system will be an integral part of the process for developing the FY 1980 budget.

### *Review of Academic Degree Programs: Striving to Keep Higher Education Viable in a Time of Limited Resources*

*W. Wray Buchanan, The State University and Community College System of Tennessee*
*Charles B. Fancher, The State University and Community College System of Tennessee*
*Lawrence B. Fuldauer, The State University and Community College System of Tennessee*

The Tennessee State Board of Regents adopted a resolution at its March 1977 meeting directing the staff to conduct a study of low-producing degree programs in the system. Such a study was initiated using criteria for program review selected by the system's Academic Affairs Sub-Council. Members of this sub-council are the chief academic officers of the system institutions.

Board staff screened all degree programs using the average annual number of graduates during the four-year period ending Summer 1976. The one hundred sixty-seven programs failing to meet this criterion were screened at the campus level using criteria relating to faculty load, cost per student credit hour, course utilization, head-count enrollment, and institutional priorities.

Study recommendations resulted in the removal of forty-seven programs from the low-producing list, continued monitoring of forty-nine, an in-depth review of fifty-one, consolidation of ten, and termination of five.

By focusing institutional attention on the review of academic programs, high-cost programs with low productivity output measures will be assessed to determine the desirability and feasibility of continuing them. In this manner, institutions will better utilize the scarce resources provided to them for the education of the citizens of the state.

***Report on a Pilot Project in Performance Funding***

*Richard G. Dumont, Tennessee Technological University*

This paper is a report on the execution and outcomes of the THEC Performance Funding Project at Tennessee Technological University (TTU) during the academic years 1976–77 and 1977–78. The paper is intended as a case study and it describes the rationale for the project; the participants, events, and procedures involved in its execution; several of the problems encountered; and the successes, failures, and unintended positive outcomes of the project.

The THEC Performance Funding Project at TTU is part of a statewide effort sponsored by the Tennessee Higher Education Commission (THEC) and funded by grants from the Ford Foundation, the W.K. Kellogg Foundation, an anonymous donor, and FIPSE. The stated major purpose of the project is "to explore the feasibility of allocating some portion of state funds on a performance criterion (how effective), as compared to the current allocation on activity criterion (how much)."

The principal activity encompased by the Performance Funding Project in Tennessee consists of a series of two-year pilot projects being conducted at eleven selected institutions of higher education throughout the state. The major objectives of each of the pilot projects are as follows:

1. "The first year (1976–77) of these pilot projects is dedicated to the development and/or identification of instructional goals and associated performance indicators."
2. "The second year (1977–78) calls for the acquisition of data on these indicators and the development of ways in which performance might be incorporated into the funding project."

It is hoped that this paper, which describes the experiences with the statewide project at the local campus level, contains insights into and lessons about performance funding which are generalizable to other institutions and other institutional settings.

## 4-G AFFIRMATIVE ACTION IN HIGHER EDUCATION

*R. Sue Mims, Chairperson, University of Michigan*

***Equal Pay for Equal Qualifications?: A Model for Determining Race or Sex Discrimination in Salaries***

*John Muffo, University of Illinois at Urbana-Champaign*
*Larry A. Braskamp, University of Illinois at Champaign-Urbana*
*Ira Langston, University of Illinois at Champaign-Urbana*

The idea of equal pay for equal work has traditionally been translated in higher education into the concept of equal pay for equal qualifications. One attempt to determine if members of minority groups are appropriately paid is by the use of a salary equity review process, with special emphasis on the use of multiple regression. By using multiple regression, qualifications of the minority and majority groups are controlled statistically, and salaries of minority group members are predicted from a regression equation based on the majority group. Minority group members found to be receiving salaries significantly lower than predicted are assumed to be victims of discrimination.

The model proposed in this paper incorporates multiple regression as a tool to be used in one of the four stages of a complete review process. The four stages include: the policy stage; the investigation stage, during which multiple regression is utilized; the in-depth peer review stage; and finally a follow-up stage to measure the results of the first three stages. At each stage, the institutional researcher fills a unique role: at the policy stage, that of an internal consultant; at the investigation stage, an analyst; at the peer review stage, a consultant again; and at the follow-up stage, an evaluator. The major issues involving each stage and corresponding role are noted.

***Responsiveness vs. Resources: The Implementation and Impact of Affirmative Action Programs for Women in Postsecondary Education***

*Clare Rose, Evaluation and Training Institute*
*Glenn F. Nyre, Evaluation and Training Institute*
*Penny D. Foster, National Science Foundation*

The Evaluation and Training Institute is conducting two national studies investigating the enrollment and employment of women in science and engineering in doctoral-granting institutions of higher education. The purpose of the studies is to identify national academic employment and enrollment trends and to explore the underlying dynamics of occupational choices and career stability of women in science and engineering.

Data for the studies derive from the National Science Foundation's Surveys of Graduate Science Student Support and Postdoctorals and Scientific and Engineering Personnel Employed at Universities and Colleges, collected annually from 2,300 colleges and universities. For the purpose of these two studies, the fifty institutions employing the largest numbers of full-time scientists and engineers have been selected for extensive statistical analysis. In addition, a case study sample of 9 institutions was selected to represent the diversity of institutions being studied in terms of geographical region, type of control, and the percent of women employed full-time in the fields being considered.

Preliminary findings will be reported, including several factors identified as a result of the case study site visits conducted thus far which mitigate against positive outcomes from even the most rigorous affirmative action programs. The focus of the presentation will be on policy and program implications for both the National Science Foundation and the institutions.

***A Method for Monitoring University Faculty Salary Policies for Sex Bias***

*Larry O. Hunter, University of Idaho*

For the last three years, the University of Idaho has utilized multiple linear regression techniques in policy capturing analyses on faculty salaries. A model using rank, years in rank, highest degree, administrative responsibility, and field of specialization to predict academic year salary rates has been developed.

An analysis of residuals from this model, with sex as the independent variable, showed essentially none of the remaining variance correlated with sex. However, when the field of specialization variable was dropped from the model, a significant relationship with sex, in favor of male salaries, was found in the residuals.

To evaluate the "industry-wide" validity of the regression weights for the fields of specialization, the correlation coefficients were calculated between the weights and the average salaries by rank for each field from a nationwide salary survey which reports salary by rank and discipline. The correlations between the regression weights for fields of specialization and average salaries for these fields were quite high for average salaries from all three of the professorial ranks. These high coefficients indicated that the salary differences were in close congruence with the differences between these fields in the national market in which the university competes for faculty.

## Time Period 5 Monday 2:00–3:30 p.m.
## Concurrent Sessions

## 5-A CREATIVE PLANNING AND ITS IMPACT ON ENROLLMENT AND PERSONNEL POLICIES

*Stephen A. Hoenack, Chairperson, University of Minnesota*
*William C. Weiler, University of Minnesota*
*Peter J. Czajkowski, University of Illinois*

This session explores how a university can relate more advantageously to the instructional and research demands of its constituencies. To this end, the effects of appropriate roles of direct and incentive planning as well as tuition policy on a university's ability to hire new faculty and

to acquire flexible, uncommitted resources without program reduction are discussed. The effects of tuition policy are analyzed via a behavioral approach to enrollment forecasting.

## 5-B INSTITUTIONAL FINANCIAL ASSESSMENT: METHODOLOGY AND MEANING

*John Minter, Chairperson, John Minter Associates*
*Hans H. Jenny, College of Wooster*
*T. Michael Elliott, Missouri Department of Higher Education*

This session presents the latest advances in the art of acquiring, analyzing, and interpreting institutional financial data for local and industry-wide financial health assessment. Specific attention is given to financial ratios and their use in describing financial condition. Examples are based on data obtained from audited financial statements recoded to NACUBO-ICPA standards and used in studies of national scope. Knowledge of accounting is not a prerequisite for this discussion.

## 5-C INTERFACING PLANNING STRATEGIES AT THE STATE, INSTITUTIONAL, AND INTRAINSTITUTIONAL LEVELS

*Marvin W. Peterson, Chairperson, University of Michigan*
*Richard J. Meisinger, University of Maryland*
*Nick L. Poulton, Western Michigan University*

This session focuses on the context of, and strategies for, planning at the institutional level. The format features three informal presentations and discussion. First the notion of strategic planning, which focuses on the institution (college or university) environment interface, is presented. Several alternative strategies for examining this relationship in terms of primary resource linkages are examined, including samples and identification of benefits and issues that are raised. The second presentation focuses on an important dimension of the institution environment interface: the impact of state planning on institutional planning. Developments in this arena and their implications for institutions are discussed. Finally, several variations in internal strategies for institutional planning, with specific examples drawn from several major research universities, are highlighted. The session presentations are designed to conceptualize planning at these three levels and then relate it to practical issues and examples. Discussion relies on the experiences and concerns of the session attendees.

## 5-D STUDENT FINANCIAL AID: AN ANALYSIS OF TRENDS AND RAMIFICATIONS

*John B. Lee, Chairperson, Education Commission of the States*
*John Haines, U.S. Office of Education*
*Lawrence Gladieux, The College Board*
*Elizabeth Suchar, College Scholarship Service*

This session describes and analyzes the potential of student aid programs to realize different goals for students, institutions, and states. The central assumption is that student aid has become a major part of the financing of higher education in this country. There is every indication that it will continue to increase in importance. It seems that student aid is treated by many planners and decision makers as a relatively minor factor in planning at the institutional and state levels. There needs to be greater coordination of student aid programs at all levels in order to meet the goals of higher education in the next decade.

## 5-E ALLOCATING ACADEMIC RESOURCES

*Mark Meredith, Chairperson, University of Colorado*

### *Linking Academic Priorities to Resource Decisions*

*Robert W. Lawless, University of Houston*
*Marilyn Levi, University of Houston*
*Douglas J. Wright, University of Houston*

Plans are merely translations of organizational priorities to operational terms. The operating budget is (or should be) the fiscal translation of academic goals and priorities. This paper suggests an approach to linking academic priorities and resource allocation decisions which is relatively uncomplicated, is susceptible to change in accordance with institutional opportunities, and is founded on academic priorities.

The process involves three major phases. First, each academic department (or program) is categorized as to two major academic criteria: (1) centrality to the overall mission of the institution, and (2) aspirational level of quality to be attained or maintained during the course of the current planning period. Taken together, these characteristics describe a two-dimensional matrix of the academic priority assigned to each of the institutions' departments.

Department descriptors are then assigned which indicate relative resource needs. These descriptors might include whether the department is engaged principally in undergraduate or graduate instruction, whether it services principally its own or other majors, and the uniqueness of its curricula and facilities. Each descriptor may then be assigned a weight to arrive at a composite departmental cost/allocation index. This allows determination of the relative adequacy of resource bases for each department vis-a-vis all others.

Finally, based upon the intersection of academic priorities and current resource adequacy, allocation priorities are determined upon which budgets will be based. While academic priorities do not necessarily translate directly to resource allocation priorities, the process uses these academic priorities as its foundation, and what emerges should be reflective of their importance.

### *Quality and Resource Allocation in Graduate Institutions*

*John Muffo, University of Illinois at Urbana-Champaign*

Quality in graduate education in the United States has been measured in a number of ways, with the best known being professional peer ratings such as those done by Cartter in 1966 and Roose and Andersen in 1970. Such ratings of quality by peers have been found to be influenced by proxy variables such as average number of publications per faculty member and department size.

This paper examines the resource allocations of high- and low-ranked institutions as identified by Roose and Andersen. More specifically, it uses publicly available data to answer the question of whether higher ranked universities do, in fact, pay higher average salaries than lower ranked institutions as is commonly believed. It also deals with the issue of how differently the higher and lower ranking universities distribute salary dollars among the academic ranks.

The same ranking methodology is then used to compare higher and lower rated departments within a university as to the way resources are distributed internally. The paper shows the similarities among the higher and lower ranked departments at one institution as to faculty salary distribution and teaching loads. The result is a profile of a highly ranked department. This profile of a "quality" department is then contrasted with the results of another study showing what undergraduate students at the same university feel is a quality department.

### *Critical Mass Modeling for Academic Planning*

*L.R. Jones, University of British Columbia*

The purpose of critical mass modeling for academic planning is to facilitate analysis, prioritization, and negotiation of academic program alternatives. The critical mass approach to academic planning would establish a campus-wide process and information base for prioritization of academic program development through (a) analysis of existing breadth and

depth of faculty expertise in instruction and research at the subdisciplinary level and (b) identification of subdisciplinary areas in which academic units would like to provide instruction and research in the future.

Critical mass program elements are defined as those portions of the curricular and research activities of an academic unit which are essential to achievement of instructional and research goals as defined by the academic unit. Critical mass denotes the level of course offerings and research which academic units could not reduce and still maintain programs which fulfill their own objectives compatible with the overall mission of their institution. Critical mass program size and core resource requirements would be established by academic unit faculty and then would be negotiated with committees of academic senates and with institutional administrations.

Under conditions of limited and selective growth, institutions propose resource allocation changes which are not strictly related to overall institutional enrollment levels. These proposals often focus attention on the resource impact of internal shifts in student demand and the desirability of maintaining minimum, or critical mass, levels of academic program breadth and quality. This paper addresses the academic planning procedures needed to advance non-enrollment-driven resource maintenance and acquisition proposals at institutional and state levels.

## 5-F IDENTIFYING SOURCES OF CONFLICT IN DESEGREGATION OF STATE SYSTEMS OF HIGHER EDUCATION

*Norman P. Uhl, Cochairperson, North Carolina Central University*
*Jeff E. Smith, Cochairperson, North Carolina Central University*
*Linda K. Pratt, North Carolina Central University*
*Robert L. Hester, Jr., North Carolina A & T State University*
*Donald J. Reichard, University of North Carolina at Greensboro*
*Thomas H. Stafford, Jr., North Carolina State University*
*Paula Kuebler, U.S. Office for Civil Rights*

In July of 1977, the Department of Health, Education, and Welfare (HEW) issued court-ordered guidelines for the development of plans to desegregate state systems of higher education. One of the requirements is to increase minority enrollment in the predominantly white institutions. In the face of stability in the total number of students, this requirement places the predominantly white and black institutions in competition for black students. It also means that, if the predominantly black institutions are to grow, they must actively recruit white as well as black students.

Given this situation, both predominantly black and predominantly white institutions will benefit from research examining student reasons for attending predominantly white or black institutions, attrition rates of black and white students at these two types of institutions, and the students' perceptions of the environment at these institutions. This session presents research papers on each of these topics, followed by a paper discussing their implications for a predominantly white and a predominantly black institution and a reaction by a representative of HEW.

## 5-G ENROLLMENT FORECASTING AND MODELING

*James S. Martin III, Chairperson, University of Colorado*

***Predicting Next Year's Resources***

*C. Dudley Salley, Georgia State University*

Accurate enrollment forecasts are a prerequisite for reliable budget projections because tuition payments make up a significant portion of a university's anticipated revenue. Accurate forecasts are even more critical to revenue projections when state funds allocations are tied by a formula to credit-hour enrollment.

Unfortunately, budget forecasters often extrapolate the latest enrollment change indefinitely into the future. Such judgment can mistake short-term seasonal and cyclical variation for a change in the long-term growth trend.

The risk of such a mistake is especially high when the growth trend is moderate, as in the 1970s, because short-term variations are more visible than they are during periods of rapid growth, as in the 1960s. Under present conditions, if a temporary increase in enrollment in one year is extrapolated as a trend change to the following year, underbudgeted years will alternate with overbudgeted years. This will mean last-minute travel and procurement curtailments.

These errors can be avoided by using simple techniques of time series analysis to identify fairly stable short-term enrollment patterns. Enrollment flucuations can then be viewed as a composit of short-term variations and the long-term trend variation. The techniques are demonstrated as applied at a large, public, urban university.

### *Modeling Student Enrollment Patterns*

*David Jowett, University of Wisconsin-Green Bay*
*Douglas Lamont, Roosevelt University*

Increasing demands for accountability require greater sophistication in predicting demand for existing majors and new programs. Faced with a stationary or declining student base, we cannot respond with a stagnating curriculum. Hiring decisions cannot be readily reversed, so careful planning must precede curricular innovation and should incorporate estimates of demand.

Enrollment projections can be based on student interest or prospects for employment. While one might prefer to use student interest, prudence dictates that both be examined. Several techniques are reviewed, including (a) extrapolation of historical trends, (b) broad field assessment from census data, (c) proportion of graduates in related fields, (d) Bureau of Labor Statistics data, (e) direct survey sampling, (f) probability models of student flow, and (g) enrollment and career trends. Illustrations are made by reference to studies performed in the University of Wisconsin and conclude that the choice of method will depend on the situation under study.

Assumptions needed to make these methods practicable should neither be avoided nor disguised. They are integral to the modeling process, at best a fallible art. Decision making under uncertainty is part of the executive function, and explicit assumptions merely make uncertainty explicit. But the nature of the assumptions should not be hidden, and assumed values should be varied to give upper and lower projections.

The optimum practice is to compare estimates from several sources. Even so, projections of demand should inform, but not drive, decision making. Enrollment projections, in view of their proneness to error, the short forecast horizon, and the long-term job mobility of graduates, should not override judgments based on educational principles.

### *Enrollment Projections When the System Changes*

*David C. Montgomery, State University System of Florida*

In validating the enrollment projection procedures for Florida's public university system, it has been assumed that projections of enrollment were made beginning in 1967 for the six universities which existed then. The complicating element is that three universities were added to the state university system after 1967. That addition affects the projection of the original six, and an investigation of the effect leads to a process for making projections when new programs are initiated or existing programs eliminated.

County population and K–12 school enrollment project reasonably well the undergraduate enrollment of students from those counties not strongly influenced by the new universities, at those universities which are not expanding by virtue of new program addition themselves. Given those conditions, the process uses projections of university enrollment based independently on population growth and on public school enrollment growth, combining those two projections according to the fraction of the university's students in normal progression from high school graduation (determined by student age). Treatment of enrollment from counties influenced by the opening of new universities includes the assumption of "constant relative probability." The projection incorporates the probabilities for attending

the new university and for attending the given university before the new one opened. Under sufficiently controlled conditions, the projections give reasonable agreement with observed enrollment changes.

## Time Period 6 Monday 3:45–5:15 p.m.
## Concurrent Sessions

### 6-A POLITICAL BEHAVIOR IN HIGHER EDUCATION BUDGETING

*Joan C. Tonn, Chairperson, University of Massachusetts-Boston*
*Bernice E. Bradin, Harvard University*
*William P. Fenstemacher, University of Massachusetts-Boston*

Nowhere in universities are decisions more critical and contested than in the budgeting process. Disagreements arise and are often resolved by the use of power in complex political behaviors. In many institutions, the institutional researcher has been thrust squarely into the midst of this political budgeting process. Program evaluation, cost analysis, review of departmental budget requests, work-load and productivity analyses are only a few of the institutional research activities that are becoming an integral part of the budget system of many institutions.

The seminar presents a theoretical construct for understanding and predicting political behavior in budgeting, addressing both the intentions of the political actor and the value of his or her behavior in terms of its contributions to organizational effectiveness. The construct is used to explore some typical political behaviors of institutional research and budgeting officers and to develop ways to make political behaviors of these staff units more functional for the organizations they serve.

### 6-B STUDENT CHOICE AND ITS IMPACT ON INSTITUTIONS

*Paul Wing, Chairperson, New York State Education Department*
*Glenwood L. Rowse, New York State Education Department*
*Pamela Christoffel, College Entrance Examination Board*

As the number of high school graduates decline in the 1980s and 1990s, colleges and universities will be faced with difficult choices, both individually and collectively. Their responses to this situation will set the tone, cooperative or competitive, for higher education. This session examines some state and federal approaches to the problem of understanding student demand for higher education. It describes research and strategies designed to identify important patterns, trends, and relationships that will support higher education planning at all levels.

### 6-C THE VALUATION PROBLEM IN THE STUDY OF HIGHER EDUCATION OUTCOMES

*Mary E. Corcoran, Chairperson, University of Minnesota*
*William S. Reece, University of Minnesota*
*Jack E. Rossmann, Macalester College*

Outcome valuation issues are examined from three perspectives. Reece argues that no centralized resource allocation will satisfy the output preference requirements of students. He suggests alternatives. Rossmann examines the student outcomes research of the past fifty years as well as the results of a recent study of alumni perceptions comparing emphases on affective vs. cognitive outcomes. He outlines likely future directions in these emphases. Corcoran discusses differences in approaches to educational outcomes depending on the unit of anlysis, i.e., the student, the program, or larger unit, contrasting those that focus on inputs and outputs with those that are concerned with the nature of educational processes.

She draws implications for future directions of institutional research, especially as it may be directed toward the student consumer.

## 6-D INSTITUTIONAL VITALITY AND THE CHANGING NEEDS OF SOCIETY

*Robert H. Linnell, Chairperson, University of Southern California*
*Marilla D. Svinicki, University of Texas at Austin*

This session is devoted to (a) a review of the major internal problems which higher education must face, (b) an assessment of how these problems may impact the institution's ability to adequately meet the needs of society, and (c) ideas on how institutions can change to enhance their vitality.

Problem areas for discussion are steady state and retrenchment, early and late retirements, aging faculty and rank escalation (e.g., decline in junior faculty, increase in senior faculty), affirmative action programs, part-time faculty, increasing cost of higher education (internal as well as external inflation), collective bargaining, tenure, the rigidity of academic disciplines and supplemental income (overload teaching, intellectual property rights, consulting, summer salary) and conflict of interest. Assessment of the impact of these problems is made primarily by the use of the University of Southern California Faculty Model (a computer simulation model).

Positive suggestions for alleviating these problems are proposed. The include faculty evaluation and faculty renewal, policy development to facilitate faculty career changes, including changing to staff positions within the university and temporary or permanent exchanges with government and industry. Other possibilities include shifts of full-time to part-time, and vice versa, as well as incentive to early retirement.

## 6-E HEALTH PROFESSIONS

*Meredith A. Gonyea, Chairperson, College of Medicine and Dentistry of New Jersey*

## 6-F STATE AGENCIES

*Frank A. Schmidtlein, Chairperson, Maryland State Board for Higher Education*
*Kerry Davidson, Louisiana Board of Regents*
*John Wittstruck, Nebraska Coordinating Commission for Postsecondary Education*
*Joseph Popovich, Maryland State Board for Higher Education*
*Michael Mullen, Council of Higher Education for Virginia*

This session explores major policy issues that are being addressed by state higher education agencies. The speakers briefly describe major activities taking place in their states in the areas of academic program review, information system development, statewide planning, and finance and budgeting. Following the presentations, a discussion, with audience participation, focuses on major state trends, issues, and activities in each of these areas. The objective of the session is to increase awareness of the issues being addressed by state higher education agencies and to describe the approaches that are being taken to resolve these issues.

## 6-G TRADITIONALLY BLACK INSTITUTIONS

*Charles I. Brown, Chairperson, Fayetteville State University*
*Samuel Baldwin, Howard University*
*Robert I. Lewis II, Norfolk State College*
*Annie R. Hayes, University of the District of Columbia*
*W. Archie Blount, North Carolina A & T State University*

To stimulate a greater interest among institutional researchers in the sharpening of certain basic skills as a prelude to the presentation of papers at conferences, forums, seminars, and symposia, this session focuses on the "nuts and bolts" of responding to calls for papers

issued annually by professional associations. Discussion ranges over a variety of topics from selection of a research topic, through clarity of design, to content analysis. It is hoped that results from these efforts will improve the means of informing the public about the traditionally black colleges and universities (TBCU's) and their clientele. Participants are, therefore, encouraged to attend the session with a concrete research study in hand.

## Time Period 7 Monday 7:00–9:00 p.m.
## Workshops

### 7-A A CRITICAL STRATEGIES WORKSHOP FOR NEWCOMERS TO INSTITUTIONAL RESEARCH (continued from time period 1-A)

### 7-B PLANNING SYSTEMS AND RESOURCE ALLOCATION

*E. Michael Staman, Christopher Newport College*
*Edwin R. Smith, West Virginia University*
*James R. Montgomery, Virginia Polytechnic Institute and State University*

This workshop is designed to investigate the role that institutional research and planning plays in the institutional resource allocation process. The workshop begins with the presentation of a planning system. Some of the salient features of the system include its decentralized nature, its relationship with institutional research, and the general flow of information throughout the system. The detailed design of a second planning system is then developed. Actual documents used in the system are reviewed and their usefulness in translating planning information into management information is explored. Finally, one particular application of the concepts through the use of formula-based funding is developed. Particular attention is given to the advantages and disadvantages of using a formula-based funding scheme as a concluding element of a planning process. Time permitting, an open forum or a seminar-style discussion with workshop participants contributing concludes the workshop.

### 7-C NETWORK ANALYSIS PLANNING TECHNIQUES

*William L. Tetlow, University of British Columbia*

This lecture/lab workshop was designed to instruct participants in the application of network analysis techniques to institutional research and planning problems. Topics covered included Flowcharting, Arrow and Node diagrams, Critical Path Analysis, and *P*rogram *E*valuation and *R*eview *T*echniques. Theory and application was presented with visual aids as well as through individual and small group practical exercises.

## Tuesday, May 23

## Time Period 8(1) Tuesday 8:00–9:30 a.m.
## Special Interest Group

### 8(1)-A INSTITUTIONAL RESEARCH COUNCIL OF ELEVEN (IRCE)

*Eugene C. Craven, Chairperson, University of Wisconsin System*
*Thomas M. Freeman, Michigan State University*
*A. Lawrence Fincher, University of Michigan*

The annual meeting of this special interest group focused on two topics of central concern: enrollment forecasts and state funding mechanisms.

Thomas M. Freeman examined the key factors to be considered in the development of institutional enrollment forecasts and discussed the implications of enrollment forecasts for such policy considerations as staffing, tenure decisions, and academic program review. In addition, current views on long-range enrollment forecasts were exchanged among the participants.

A. Lawrence Fincher presented a conceptual framework for describing funding formulas in terms of form and function. He identified several of the primary functions to be served by funding formulas and provided a checklist of characteristics by which institutions could evaluate the nature (and, perhaps, appropriateness) of their formulas.

## Time Period 8(2) Tuesday 8:30–9:30 a.m.
## Special Interest Groups

### 8(2) COMMUNITY COLLEGES: ENROLLMENT TRENDS AND MARKETING PROCESSES—THEIR IMPACT ON STRATEGIC PLANNING

*Stephen J. Groszos, Chairperson, College of DuPage*
*Elaine L. Tatham, Johnson County Community College*
*Horace F. Griffitts, Tarrant County Junior College*
*William E. Campbell, Community College of Baltimore*
*Paul G. Larkin, Prince George's Community College*

The era of increasing enrollment led to straight-line projections and an assumption of continuing growth. Similarly, with declining enrollment, there is a tendency to overreact and to assume that this decline will continue. Factors influencing enrollment must be closely monitored, and educational needs of future students must be identified. Retention can be a significant consideration in a climate of declining enrollment. This session reviews the experience of one college with a high attrition rate in certain course offerings, making an analysis of the basic elements of the problem and impact on student retention. Colleges can improve their viability for the future by developing a strong marketing program which moves the college into the era of consumerism. The session also focuses on the consumerism concept as it relates to higher education and the basic elements of a good marketing program for colleges. Institutional research exercises an important role in assessing enrollment trends and in implementing the marketing process.

### 8(2)-B RESEARCH ACTIVITIES IN THE EUROPEAN COMMUNITY

*Aidan Duggan, Chairperson, Royal Irish Academy*
*Paul M. Levasseur, Organization of Economic Cooperation and Development (OECD), Paris*

The session concentrates on recent research programs in the various European states—in particular, the comparative studies on university financing organized from the Catholic University of Louvain and the various collaborative projects of the Program on Institutional Management in Higher Education (IMHE) of the Organization for Economic Cooperation and Development (OECD).

The discussion attempts to identify the common problems facing universities and colleges, be they in Europe or North America, and to see if some of the suggested solutions in Europe might survive transatlantic transplantation.

## 8(2)-C SOUTHERN UNIVERSITY GROUP OF 25 (SUG-25)

*Edwin R. Smith, Chairperson, West Virginia University*

The Southern University Group of 25 (SUG-25) is a special interest group consisting of representatives of doctoral-granting, publicly supported universities in the SREB (Southern Regional Education Board) states. SUG-25 holds a major forum each fall for the exchange of ideas and paper presentations. This meeting, held in conjunction with the AIR Forum, plans for the fall meeting and takes up any items of a business nature.

## Time Period 9 Tuesday 9:30–10:45 a.m.
## General Session

*William F. Lasher, Chairperson, University of Texas at Austin*

## 9-A GENERAL ASSEMBLY ADDRESS

***Some Thoughts on the Lower Profile of Higher Learning***

*Elspeth D. Rostow, Dean of the Lyndon B. Johnson School of Public Affairs, University of Texas at Austin*

## Time Period 10 Tuesday 10:45 a.m.–12:15 p.m.
## Concurrent Sessions

## 10-A CAPITAL COSTS

*Jerry Schillinger, Presenter, University of Denver*

With static or declining enrollments in the 1980s, facilities will cost more per student to operate. Better utilization of space will become an economic necessity before true assessment can be made for remodeling, new facilities, or demolition of facilities not needed. New construction and remodeling costs will reach levels beyond the economic grasp of colleges and universities. Handicapped requirements, deferred maintenance, and energy costs in the 1980s will place an almost unbearable burden on the financial resources of your institution. Considerable time and effort will be needed in the 1980s to cope with all costs associated with your capital investment.

## 10-B FINANCIAL PLANNING, TRADEOFFS, AND COMPUTER MODELS

*David S.P. Hopkins, Chairperson, Stanford University*
*Nathan Dickmeyer, Standford University*
*Hans H. Jenny, College of Wooster*

An interactive computer model of the university's operating budget has been in use at Stanford for about two years. The model, called TRADES, quickly estimates the short- to medium-run financial effects caused by changing any of a number of central primary planning variables (PPV's), such as the number of faculty, student enrollment levels, the growth rate of tuition, and the growth rate of salaries. The user can select constraints against which to test the financial feasibility of proposed PPV configurations. The constraints available include initial year budget balance and budget equilibrium over the longer run. The model can display a long-range financial forecast for any number of years, trade-off graphs, and feasible (within constraints) limits of PPV combinations. The session includes a live demonstration of the TRADES model and a discussion of its application at Stanford and other schools as well as its limitations.

## 10-C COMMUNITY COLLEGE PLANNING

*Nolen Ellison, Presenter, Cuyahoga Community College*

## 10-D THE USE OF HEALTH MANPOWER SUPPLY/DEMAND ANALYSES IN EDUCATIONAL PLANNING

*J. Stephen Smith, Chairperson, University of Alabama in Birmingham*
*James McGill, University of Illinois Medical Center*
*Larrie J. Dean, State Council of Higher Education for Virginia*
*John M. Glasgow, University of Connecticut Health Center*

A perplexing issue facing many institutions is the demand that they serve as vocational training agencies. This is particularly true for public institutions, where students, parents, and legislators want to know what jobs the students will obtain in return for their investment in the institution.

Some practical information about experiences in manpower planning is offered. Methods for determining current employment data about common career categories are presented as are descriptions of how the projected needs for persons in these areas can be developed. These projected needs can be compared with planned numbers of graduates in order to construct a data base for use in advising prospective students, planners, hirers, and politicians. A number of state agencies and institutions have prepared these manpower analyses and have used different methods to obtain different results, but the net gain to academic planners is similar. The comparative validity of these varied approaches to collecting and distributing data in support of academic and political decisions is discussed also.

This session is designed to be of value to institutional researchers who are involved in structuring manpower analyses for their institutions, students, and publics.

## 10-E APPROACHES TO INSTITUTIONAL PLANNING

*E. Michael Staman, Chairperson, Christopher Newport College*

### *Balancing Needs and Resources the Thoughtful Way: Institutional Planning and Research Strategies*

*Joseph L. Gubasta, University of Utah*

The purpose of this paper is to describe a practical approach to institutional research and planning that (a) is topic- or issue- rather than process-oriented, (b) assumes planning and management to be a social rather than a technical process, (c) promotes thinking and problem solving using a variety of techniques, and (d) produces creative ideas to aid decision makers in initiating guided change. The paper discusses several important factors often overlooked by those who organize and implement planning activities. These factors include: (a) selecting planning topics and organizing planning teams, (b) analyzing all facets of planning topics, (c) identifying organizational and operational issues associated with planning, and (d) defining change goals. Several examples are used to show how managerial problems can provide planning opportunities and how to integrate problem solving and planning. The paper concludes with a discussion of the need for a thought-provoking approach to planning. This discussion identifies several methods not commonly employed by planners and institutional researchers. These methods include ways to approach planning and problem solving through creative thinking and idea development. By describing several problem-solving techniques that can be applied to a variety of managerial issues, it shows how creative thinking can yield a variety of ideas worthy of further planning attention and, thereby, encourage institutional researchers to provide decision makers with ideas as well as data.

***A Participative Procedure for Educational Master Planning***

*Stuart M. Bounds, Thomas Nelson Community College*

This paper presents a model for master planning in community colleges which was implemented in 1976 at Thomas Nelson Community College. The model assumes that long-range planning should be community based and continuous and that it should be the result of extensive participation by all segments of the college community. A model format was established after examining a broad sample of existing community college master plans. The model includes strategies for planning, for review and approval, and for research in support of the plan. Application of the model yielded a functional plan with widespread commitment among the participants.

***Institutional Planning: The Role for an Adaptive Analytic Style***

*Randall Porter, University of Pennsylvania*

When institutional research and planning join forces in an effort to combine the best features of each, two types of problem arise. The first is a tendency to confuse institutional planning with policy making itself and to devise policies rather than adjuncts to the policy process. The second difficulty arises out of the temptation to concentrate analysis for planning on small pieces of large pictures in hopes that one study, well done, will influence the broader policy process. Failure in this context often stems from irrelevance. Studies of isolated segments of a large policy mosaic run the risk of missing the central issues and forfeiting influence over the policy process. In sum, two pitfalls await the institutional researcher as planner: (1) a strategy so ambitious that it usurps the role of policy makers themselves and (2) a focus so narrow that it produces esoteric think-pieces of little internal relevance.

This paper suggests that a middle ground exists and introduces two strategies. First, that instead of trying to generate policies fully formed, institutional planners establish the parameters, the ground rules, within which decision makers operate. Second, institutional planning must make its analytic techniques more adaptive, more responsive to the demands of practical policy making. In practice, this means undertaking analysis which reflects the perceptions of policy makers themselves and which responds to rapid changes in the policy process. Because nothing remains fixed for long—not resources, nor priorities, nor internal power configuations—the key is flexibility. An example describing the University of Pennsylvania tenure planning system is presented, touching on issues of durable and nondurable income, historical income trends, faculty flow, and prudent tenure levels by school, based on five-year estimates of durable income.

## 10-F STUDENT ADMISSIONS AND ATTRITION

*Frank S. Black, Chairperson, Texas Southern University*

***No Shows—Who and Why***

*Robert L. Bailey, University of California, Berkeley*
*Kristin P. Anton, University of California, Berkeley*

A great deal of money and effort is expended in the university admissions process to attract qualified applicants. Getting these students to apply, however, is only the first step in getting them enrolled; many choose not to attend the university. To determine if there was a pattern to these "no shows," the University of California, Berkeley (UC Berkeley) surveyed undergraduate applicants who were admitted to, but did not attend (approximately 1700), the UC Berkeley in the fall quarter of 1976.

The main focus of the study was on the freshmen, whose demographic profiles, high school achievement levels, financial aid breakdowns, and reasons for preferring the college of choice could be compared with the Admissions Testing Program (ATP) and American Council on Education (ACE) reports for UC Berkeley fall 1976 freshmen. No-shows were divided into three sub-populations: those who attended another prestige institution, those who attended a less selective or prestigious college or university, and those who did not

attend college in fall 1976. The Gourman ratings and Barron's selectivity index were used to classify institutions. As expected, most of the no-show applicants fell into the first category.

Applicants who attended another institution were requested to compare Berkeley with that school on sixteen decision factors, including academic, administrative, and personal preferences. Analysis of survey results clearly shows the institutional strengths and weaknesses of a distinguished state university, as perceived by applicants whose chose to go elsewhere. Implications for a more effective admissions process follow directly from the study's findings.

### *Admissions-Yield and Persistence Analysis*

*Leonard Ramist, Educational Testing Service*

Approximately one million high school students in each graduating class participate in the Admissions Testing Program (ATP) of the College Board (about one-third of each graduating class and three-fourths of all immediate, degree credit, full-time college entrants). Through the program, students taking the Scholastic Aptitude Test and Achievement Tests provide information about their interests, backgrounds, activities, and educational plans.

An admissions-yield and persistence analysis is presented which summarizes results for the colleges which have supplied admissions status and persistence information in the ATP summary report process. It describes the characteristics of the following: the prospective applicants who typically apply and those who typically do not apply (in terms of application rates); the applicants who are typically accepted and those who are typically not accepted (in terms of acceptance rates); the accepted applicants who typically enroll and those who typically do not enroll (in terms of enrollment rates); and the enrolling freshmen who typically persist and those who typically do not persist (in terms of persistence rates). These overall patterns are described in terms of high school rank, test score levels, income levels, degree-level goals, sex, type and location of high school, ethnic background, years of study of subjects in high school, high school activities, intended areas of study, college housing preference, special assistance plans, advanced placement intentions, extracurricular activity plans, and self-reported skills and abilities. Separate analyses are presented for various categories of colleges, and changes over the three years are noted.

### *An Evaluation of Three Basic Designs for Studying Attrition*

*Patrick T. Terenzini, Syracuse University*

Several researchers have called attention to the uneven quality of many "local" attrition studies, noting particularly the inadequacy of the designs and the inappropriateness of the analytical procedures sometimes adopted. Given the current concern with maintaining stable enrollments, however, it seems likely that administrators will continue to call for studies of attrition on their campuses. This paper describes three basic designs for studying college student attrition and discusses the comparative assets and liabilities of each. "Autopsy," cross-sectional, and longitudinal designs are evaluated with respect to such considerations as likely response rates and sample representativeness, controls for confounding variables, desirable analytical procedures, staff training and experience needed, time lines, relative costs, applicability of data to other purposes, and data management problems. The paper is intended to facilitate the cost-benefit considerations inherent in the decision to undertake an attrition study on one's own campus by highlighting the research and practical trade-offs required by the selection of a particular design. The paper is intended to be of use to persons who may do institutional attrition studies but whose special skills do not include social science research methods and to administrators who may use the results of such studies in decision making. The purpose of the paper is to offer the former a means of making design selections that are appropriate to institutional questions and resources and to offer the latter a means of evaluating what is produced.

## 10-G MANPOWER AND LABOR MARKET STUDIES IN HIGHER EDUCATION

*Donald M. Norris, Chairperson, University of Houston*

***A Multi-Institution Study of Career Patterns among Recent Liberal Arts College Graduates***
*Jack E. Rossmann, Macalester College*
*Patricia Wishart, Associated Colleges of the Midwest*

In recent years, much has been written about the "plight of the liberal arts graduate." To achieve more adequate information about career patterns of recent graduates of small, liberal arts colleges, a study of recent alumni from 11 of the 13 members of the Associated Colleges of the Midwest was undertaken in the winter and spring of 1976.

During February of 1976, a questionnaire was sent to the approximately three thousand 1975 graduates of the 11 colleges, and two months later a similar questionnaire was sent to about three thousand graduates of 1960, 1965, or 1970. Each college chose one of these three earlier graduating classes to follow up. Rates of response ranged from 61 percent among the 1975 graduates to 43 percent for the 1960 cohort. A telephone follow-up indicated that, in terms of primary current activity, there were no significant differences between respondents and nonrespondents.

Data from the 1976 graduates indicated that 36 percent of the men and 22 percent of the women were enrolled in graduate or professional school in the first year following graduation. Three percent of the men and six percent of the women were unemployed, and most of the rest of the 1975 graduates were working either full or part time.

Among the two earliest cohorts (1960 and 1965), there were striking differences in the activities of men and women. Whereas more than 90 percent of these male graduates were employed full time, less than one-third of the female graduates were working full time, and more than one-half of the women said their primary activity was unpaid household duties. These sex differences did not appear among the 1970 and 1975 graduates.

Among graduates who were employed full time, the data examined the kinds of employment and the relationship of employment to major field. Graduates were also asked to assess their satisfaction with their college in terms of employability only.

***NSF Analysis of Supply/Requirements for Ph.D. Scientists and Engineers***
*Larry W. Lacy, National Science Foundation*

The National Science Foundation (NSF) first published in 1967 projections of the supply and utilization of doctorate scientists and engineers. Current development of new projections is based on both extramural and intramural research. A grants program funds projects that investigate factors such as the mobility of highly trained technical personnel as well as new approaches to projections. Intramural research is examining the role of the market in affecting numbers of doctorates earned and the utilization of doctorates in various sectors. NSF staff have found that the rates at which baccalaureates enroll in and complete doctoral programs can be related to conditions in markets for new doctorates. Two different variables, starting salaries and percents of new Ph.D.'s seeking employment, serve to measure market conditions. Annual variations in these measures, in turn, are associated with numbers of new graduates and demand factors such as industrial R&D spending and junior faculty openings.

Utilization of scientists and engineers in industrial research and development relates statistically to R&D spending. Likewise, numbers of degrees granted explain, at the national level, much of the variation in employment of full-time academic staff. Mortality and retirement information from the Teachers Insurance and Annuity Association allows etimates of the attrition of academic staff. New survey data permit estimating the proportions of new faculty who have doctorates.

***Time to Ph.D. and the Academic Labor Market***
*Charlotte V. Kuh, Harvard University*

It is a commonly accepted prediction that enrollments in traditional institutions of higher education will level off in the late 1970s and actually decline during the mid-1980s. This paper addresses the question of how the time from baccalaureate degree to doctorate, which is one of the variables that affects the duration of regular academic employment, has responded in the past and may be expected to change in the future in response to changing enrollments.

In the paper, a "logit" model is estimated using data from the 1973 Survey of Teaching Faculty that was performed by the American Council on Education. This methodological technique was developed by the author and Roy Radner in a previous paper. The logit model expresses the log of the odds of receiving the doctoral degree a given number of years after receiving the baccalaureate and at a given date as being dependent on the time since the respondent received his or her baccalaureate degree (an age effect) and the date at which he is a candidate for, but has not yet received, the Ph.D. (a date effect).

It is found that, although the time to Ph.D. fell in the 1960s, by the early 1970s it had begun to rise again in a number of fields. If the time to Ph.D. becomes longer when there are fewer job openings, then, other things equal, the expected length of academic employment of those Ph.D.'s will be shorter and the number of new job openings will be larger than they would have been in the absence of adjustment of time to Ph.D. Policy implications of the observed adjustment for doctorate-granting institutions and for federal support of graduate education is discussed.

## Time Period 11 Tuesday 12:15–2:00 p.m.
## AIR Luncheon

*Jack E. Fossmann, Chairperson, Macalester College*

### LUNCHEON ADDRESS

***Some Reflections on the Current Position and Future Outlook of American Higher Education***
*Howard R. Bowen, R. Stanton Avery Professor of Economics and Education, Claremont Graduate School*

## Time Period 12 Tuesday 2:00–3:30 p.m.
## Concurrent Contributed Papers Sessions

### 12-A MAKING THE PLANNING PROCESS WORK

*James O. Nichols, Chairperson, Marshall University*

***Comparing Perceived Outcomes of Different Planning Activities***
*Nick L. Poulton, Western Michigan University*

The question, Do planning techniques make a difference, and if so, to whom, and for what purpose? was addressed by studying master-planning approaches, resource-allocation techniques, and program evaluation and review procedures in several large, research-oriented universities. Observations regarding perceived utility and problems associated with these activities are discussed in this presentation. A sample follows.

Perceived utility varied by organizational level. Master planning and resource allocation techniques were the tools of the central administrator and were not of major use to the department chairperson. Program evaluation efforts had greatest impact on the units reviewed and less utility for the central administrator. The ideal cycle of goal-directed planning, followed by choice of action and evaluation of outcomes, does not come to automatic closure given the manner in which these activities are usually conducted. The most effective activities

provided alternative vantage points for viewing the organization. They organized questions, conducted analyses, and held information in ways that increased the probability that ideas would emerge and action would occur.

Expanded participation raised expectations and subsequent frustrations when limited resources provided few rewards for involvement. As planning activities were developed, communications problems became more acute. Faculty participation and the influence of planning activity on decisions related as much to the administrative style of the organization as to the characteristics of a particular planning activity. The conscious protection of openness, participation, and communication were essential to effective planning.

### *Effectively Incorporating Information Concerning Environmental Factors into the College and University Planning Process*

*Thomas J. Palmer, University of Massachusetts-Boston*

Higher education has entered a period where, perhaps more than ever before, environmental factors are having a significant impact on the operation of many colleges and universities. Instability and change in the external environment has created a need for a planning process that effectively incorporates in programmatic decisions information concerning changes within environmental factors.

The planning process can be described as a system comprising three subsystems—operational, developmental, and strategic—each containing differing levels of specificity, time horizon, and uncertainty. The operational planning process considers short-term issues, primarily the annual budget process, whereas developmental planning focuses on program objectives and resource requirements in a two- to five-year period. Strategic planning is concerned with a larger time horizon, generally five to fifteen years and with developing long-range goals and alternative strategies for achieving the goals. It is an ongoing process that attempts to assess future changes in the environment and their effects on the institution.

This paper discusses these three levels of planning, focusing on the information concerning two types of environmental factors that must be incorporated into the planning process: (1) macro-environmental factors relating to the external environment and (2) micro-environmental factors concerning the internal or institutional environment.

Examples of the macro-environmental factors that are considered include: (a) the political climate of the state (b) general economic conditions with regard to inflation, unemployment, and energy costs, (c) federal support for higher education, (d) federal regulations, and (e) potential admission pool—population trends of the college-bound age groups.

Micro-environmental factors discussed include: (a) the relationship between enrollment goals and budget requests, (b) historical student profile information, (c) departmental staffing and work-load information (tenure, faculty work load, course enrollment patterns, and assessment of qualitative strengths and weaknesses of each program), (d) collective bargaining, and (e) physical facilities needs assessment.

The interrelationships of these macro- and micro-environmental factors are examined along with the types of information concerning these factors that should be considered at each level of the planning process and the role of such information in the decision-making process of the institution.

### *An Empirical Study of Implementing an Academic Unit Planning Tool: Implications for Institutional Research and Management*

*Glenn K. Miyataki, University of Hawaii*

This paper argues that the diffusion of innovations needs to focus more upon consequences of implementation and less upon attributes of innovativeness among adopters and organizations. It describes the experiences of 37 academic unit administrators from six higher education institutions who attempted to improve their planning and management functions by utilizing a planning tool, the *Academic Unit Planning Manual*, which was developed by the National Center for Higher Education Management Systems. Administrator variables (capacity, task understanding, effort-to-perform, and participation influence) and organizational system variables (openness, resource slack, job rewards, and administrative flexibility) were studied

to determine their influence upon the applicability of the tool to attain a specific set of outcomes and to identify anticipated institutional consequences.

The evaluation instrument which was used to measure the outcomes and consequences, and which was derived from a theoretical framework of expectancy motivation and innovation theories, is discussed. For example, through the instrument, it was found that administrators who rated the tool higher in applicability for meeting their own outcome needs indicated that positive institutional consequences would occur.

The paper also covers the more popular uses of the tool, participants' insights about obstacles to implementation, and suggested methodologies for future implementations.

Despite the limitations of the study, the actual field situation brought realism to this evaluation of implementing a tool, and the paper discusses some clues for institutional research and management, e.g., the role of policies and procedures in regularizing change attempts into the daily operations of the institution.

## 12-B INFORMATION SYSTEMS FOR DECISION MAKING

*Mark L. Perkins, Chairperson, Old Dominion University*

***A Methodology for Data Structure Assessment in Higher Education Administration***
*Kenneth G. Baltes, University of Minnesota*
*Vernon L. Hendrix, University of Minnesota*

Two recent developments, one in MIS technology and the other in higher education administration, have combined to bring about the need for this study. Administrations of higher education have been forced to rely more heavily on information systems in order to allocate limited resources more effectively. At the same time, information systems technology, through the advent of data base management systems, can be more responsive to administrative information needs, provided the relationships within the data which will be required by administrators is known. The problem is to develop a methodology for revealing a relational model of the data base which administrators are operating from currently or would like to be able to operate from in the future.

The methodology consisted of the following steps: (a) data element collection—gathering all data elements currently being collected in data processing systems, (b) normalization—organizing the elements in third normal form as defined by E.F. Codd, (c) survey of administrators—asking administrators to group entities by decision area in which data about the entity would be used, and (d) data analysis—using hierarachical clustering techniques to analyze the data returned in the survey phase, determining what relationships the data base will be expected to sustain.

The analysis consisted of testing several data grouping techniques including four hierarchical clustering methods, factor analysis, and observation of summary matrices on the data. Complete linkage and average linkage cluster analysis provided what appeared to be the most reliable groupings of the entities. These two clustering techniques were applied to the data.

The methodology as it was tested was effective as an aid to the data base designer in establishing a relational model of the data base. With some modifications, however, the methodology would be even more effective.

***Information Will Not Make You Well: MIS Re-Examined***
*John D. Parker, Arizona State University*
*Don E. Gardner, Arizona State University*

The potential utility of more comprehensive, more accurate information regarding the activities and operations of higher education is a widely accepted assumption. Proponents of management information systems (MIS) for higher education have long justified their efforts on the basis of providing this kind of service to management. It is the purpose of this paper to re-examine the status of MIS in higher education by challenging this basic assumption of the MIS approach.

MIS presumes the existence of a set of individuals invested with management responsibility, a group of managers that need information to function effectively. Yet, close inspection of the way in which most institutions of higher education operate reveals that they are administered rather than managed. The distinction is critical. Managers are problem solvers; their primary concern is with effectiveness and efficiency. Administrators coordinate; they tend to seek a viable operating balance through actions and agreements based on propriety and precedent.

The proponents of MIS argue that with better information, administrators in higher education would behave more like managers, that higher education could then be managed, made more efficient, effective, and accountable. Such an argument, however, ignores important realities that constrain the behavior of individuals in administrative positions. In fact, the availability of more and better information will not, in itself, bring about substantial change in administrative behavior in higher education. Yet, MIS has important contributions to make to leadership in higher education.

As long as the value of MIS in higher education is assessed in terms of management decision making, it will not be judged as having succeeded. Unilateral decisions made on the basis of effectiveness and efficiency are not often made in higher education. However, when MIS is assessed on the basis of its contribution to building a viable operating balance, its worth will be more evident. Thus, the proper role of MIS in higher education is that of position building in support of administration rather than as a means to improve managerial problem-solving capability.

***Presidents' Vital Signs: Implications for Institutional Decision Making***
*Glenn M. Nelson, University of Pittsburgh*
*Alex J. Ducanis, University of Pittsburgh*

This research analyzed a portion of the data essential to institutional decision making. The study identified types of data used by college presidents in assessing their institutions' stability and their perception of the comparative importance of various indicators which are purported to demonstrate the vital signs of an institution. Indicators were in the areas of student flow, finance, and personnel.

Three rounds of the Delphi method were employed over a four-year period. In these interrogations, the presidents were asked to indicate their assessments of the relative importance of each of the indicators, using the following scale: high importance=3, moderate importance=2, low importance=1, and no importance=0. Mean scores and rankings were calculated for each informational subset within the three areas.

Those indicators considered most important included the overall enrollment picture, 35 of 91 items concerning finance, and 9 of 88 items concerning personnel. Although the rankings according to highest mean values varied, the five highest rated items in each informational subset were consistent in each round with only minor exceptions.

The data reflected the influence of Title IX regulations; however, these items did not reach the category of most important. Within the finance and personnel areas, the presidents felt current data to be more important than projected data. The data indicated that although the changing context in which decisions are made was reflected, the indicators utilized by presidents to determine the vital signs of their institutions' stability were consistently applicable over the four-year period of study.

***Multi-Level Information Systems***
*Leighton D. Jones, University of Toledo*
*DeForest L. (Woody) Trautman, University of Toledo*

Many universities have developed their own data collection devices and institutional models to support informational needs for reporting and "daily to long-range" decision making. Often these university-level models do not effectively support needs at college and department levels. This paper identifies some of the more prevalent problems encountered with the higher level information models and discusses HEPS (Higher Education Planning System) as a viable alternative to serve all levels. It presents a general overview of HEPS as well as a more detailed look at a particular subset of HEPS which the University of Toledo implemented on a pilot

basis with data from the College of Business Administration. A later expansion to the whole campus will benefit from this pilot experience. HEPS reports are produced at several levels of aggregation and display data for several time periods to meet the general needs of all decision makers.

Costing methodology is the crux of a planning process destined to affect budgeting. This pilot project employed and compared two methods of representing faculty work load—assigned and activity times—essential to costing the components of instruction. Reactions and comments from different levels within the university and proposed future uses for this system in actual planning and budgeting activities are presented.

## 12-C INSTITUTIONAL RESEARCH IN THE COMMUNITY COLLEGE

*Edith H. Carter, Chairperson, New River Community College*

### *Establishing Community College Goals*

*Marjorie M. Leeson, Delta College*
*Donald L. Laughner, Delta College*
*Leslie Myles-Sanders, Delta College*
*Glen E. Packwood, Delta College*

During the past decade, community colleges have substantially broadened their service populations and increased the scope of their services. Their role is now different from the one played by the traditional junior college. Along with the redefining of their role has come the question, What should be the goals of community colleges? In view of limited budgets and the recognition that the community college cannot realistically be all things to all people, it becomes necessary to establish agreed-upon goals for the institution and priorities for achieving these goals.

In 1975, Delta College embarked on a project to establish institutional goals which would provide direction for the further development of the college. The specific objectives were: (a) to prepare a set of institutional goals and a mission statement for consideration and adoption by the Delta Senate and Board of Trustees and (b) to identify those goals that should be given priority during the next 2–5 years.

In order to insure maximum community college input into the process, many different devices and techniques were used. Four of the major inputs used were: (1) The Institutional Goals Inventory, (2) Residents Learning Interests Survey, (3) Student Reactions to Delta College, and (4) North Central Accreditation Report.

A total of 19 major goals and 110 supporting goal statements were developed and ranked according to priority. Supporting goals were used to show the intent and scope of the major goals. Specific recommendations for the utilization of the results of the project were made. In implementing the recommendations, developmental objectives based upon the goals were developed and are now part of the total management-by-objectives system.

### *Validation Study on the Classification of Noncurricular Students*

*Elmo D. Roesler, Virginia Community College System*
*Jagdish Mathur, Virginia Community College System*

In fall 1976, the Virginia Community College System (VCCS) implemented a noncurricular classification system to identify unclassified students by their noncurricular educational goals.

A survey was conducted on the sample population of noncurricular students registered in the VCCS in the fall of 1976. The sample size from each college was based on the number of noncurricular students registered at the college. All samples were selected to meet a predetermined 95% confidence level. In the survey, the student was asked to indicate if the recorded noncurricular classification accurately described his or her educational goal at the time of fall 1976 registration. The students who indicated that the recorded classification was inaccurate were asked to choose another noncurricular goal or an educational program to describe their fall 1976 classification. Usable survey forms were received from 68 percent of the student sample.

Overall, 83.5 percent of the students indicated that their recorded noncurricular classifications at the time of fall 1976 was accurate. Based on the findings of the study, it was concluded that the noncurricular classification system introduced in the VCCS in fall 1976 did accurately classify noncurricular students by their educational goals.

The study supports the fact that noncurricular students subscribed to definite educational goals by enrolling in the community colleges for the purposes of developing skills for current and new jobs, exploring careers, and obtaining general knowledge for personal satisfaction. The study also indicated that noncurricular students can be classified accurately within the noncurricular classification system. These students are generally considered in higher education to be "nontraditional" students.

***A Comparative Study of the First Full-Time Job and Salary after Graduation for Selected Business Graduates from High School, Two-Year Colleges, and Four-Year Colleges***
*Nancy C. Robon, University of Toledo*

The primary purposes of this study were to determine at each successive level of education (a) the relevance of that education to the graduates, (b) the level of jobs and salaries secured, and (c) graduates' opinions of the education just completed.

The three study populations consisted of all the 1974–75 school-year graduates from ten City of Toledo high schools (340 vocational business block graduates), from two Toledo-area two-year colleges (122 selected technical business graduates), and from one four-year college of business administration (170 selected professional business graduates).

A 52.1 percent overall response rate to the questionnaire (sent within a year after graduation) was achieved from the three populations, which consisted of 112 high school graduates (32.9 percent), 94 two-year college graduates (77.0 percent), and 123 four-year graduates (72.4 percent). The characteristics of the nonrespondents at the high school level did not differ from those of the respondents.

The coefficient of contingency was used to determine whether there was a correlation between (a) the level of education and the level of job secured and (b) the level of education and the amount of salary earned. A Career Ladder Scale was developed to rate the various jobs.

It was determined, generally, (a) that most graduates found their education relevant, (b) that high school graduates secured entry-level positions, two-year college graduates entered paraprofessional positions, and those graduating from four-year colleges secured professional positions with median salary ranges of $4,000–$4,999, $6,000–$7,499, and $9,000–$10,499 respectively, and (c) that two-year college graduates rated their education higher than both high school and four-year college graduates.

***The Application of Management by Objectives in American Junior-Community Colleges***
*Eva Smith, Kansas State University*
*Betty Forster, Kansas State University*
*Charles Oaklief, Kansas State University*

## 12-D APPLYING MARKETING RESEARCH AND PLANNING TECHNIQUES TO COLLEGE ADMISSIONS AND RECRUITING PROCESSES

*James R. Dungan, Chairperson, Pennsylvania State University*

***The Uses of Student Market Segmentation Techniques in College Recruitment***
*Louis Spiro, Pennsylvania State University*

The goal of student market segmentation is to make potential students aware of institutional opportunities and to match their aspirations with the institutional environment. The process of segmentation separates prospective college students into subgroups with similar characteristics,

the most commonly used being geography, demography, attributes, and behavior. Selection of particular types of variables permits the institution to develop student segment profiles. Recruitment efforts can then focus on segments similar to the present student body, on new types of students the institution wants to attract, or on new students that are atrracted to the institution.

Data bases available for student segmentation are the American Council of Education (ACE) Fall Survey of Freshmen, the Scholastic Aptitude Test (SAT) scores reported by students to designated schools and the SAT Search Service. The advantage of ACE and SAT score report data is the level of detailed student information provided to the institution. The advantage of the SAT Search Service is accessibility to the entire test-taking population. However, only names and addresses are provided by this service, and the segmentation information is not released.

Student segments can be formed either by selecting certain characteristics to identify group membership or by grouping similar students with a cluster analysis of many variables. Multivariate statistical procedures are used to differentiate between student segments. Factor analysis reduces the large number of interrelated student variables to a smaller number of independent variables, and discriminant analysis, based on these factors, describes the characteristics that are the primary sources of difference between the groups.

### *How Do High School Students Select a College?*

*Joseph E. Gilmour, Washington Council of State College and University Presidents*

This paper reports on an exploratory marketing research study of how high school students make their college choices. The study was designed to provide information for targeting college recruitment efforts more effectively and involved in-depth interviews with approximately 100 high school students and college freshmen. Tentative conclusions about the college selection process emerging from the study include these: (1) the process is funnel-like, with the students starting with a broad conception of the higher education opportunities open to them and, through a series of phases, narrowing and refining this perception into a choice of a single institution, (2) for most students, the process is long term beginning in grade school and extending to the end of the senior year in high school, (3) the process is neither well executed nor well informed, and (4) the selection of a specific college is made by the student him or herself.

### *Developing and Implementing a Marketing Strategy*

*Mark D. Johnson, Allegheny College*

This presentation reports the findings of a field study of highly sophisticated and [illegible]ative recruiting and admissions strategies at three major American universities (to remain anonymous). Specifically, the author discusses the marketing research conducted by these institutions, the admissions and recruitment strategies formulated in response to this research, specific recruitment and admissions activities, information support systems, and results achieved. The concluding section of the presentation consists of an outline of the essential common elements of these highly effective admissions and recruiting programs.

### *Implications for College Admissions and Recruitment Programs*

*Ira Dolich, University of Nebraska-Lincoln*

The major role of marketing management is to develop and implement efficient, effective, and controlled programs which intervene in the selection and behavioral processes of the organization's target markets. Therefore, the paper first investigates how marketers approach recruiting and admissions programs as marketing program planning problems.

Next, the issues of proper development and implementation of recruiting and admissions programs involving the use of marketing tools and organizational systems are discussed.

Finally, the research conducted at the Pennsylvania State University is addressed in terms of its usefulness to marketing program development in the following areas: (a) analyzing target clienteles (market segmentation), (b) changing levels of awareness, (c) changing or reinforcing critical attitudes, and (d) maintaining or changing college choice behavior.

## 12-E CONCURRENT CONTRIBUTED PAPER SESSION

*Donald M. Norris, Chairperson, University of Houston*

***Academic Decision Making in the Community College: Strategies for Improved Leadership***
*Alton L. Taylor, University of Virginia*
*C. John Mack II, University of Virginia*
*Michael M. Meyers, University of Virginia*
*Johnnie E. Merritt, Central Virginia Community College*

Division chairpersons in the community colleges are the leaders whose decisions most directly determine the attainment of established goals and objectives. As middle managers, they must deal with such varied problems as allocating financial and human resources, resolving student and faculty conflicts, and maintaining progressive and substantive academic programs. The division chairpersons must not only deal with these problems but deal with them effectively by making good decisions.

This paper reports on a community college project to strengthen the leadership capabilities of chairpersons by improving their knowledge and skills in rational problem-solving and decision-making behaviors. The focus of the project was a workshop for chairpersons to study and practice problem solving and decision making in real-life situations.

Information collected from the project reports faculty ratings of their chairpersons as leaders, faculty and chairpersons' perceptions of the community college organization, and preferred decision-making behaviors of the chairpersons.

***The Effects of a Dual Labor Market in Higher Education***
*Robert E. Roemer, University of Texas at San Antonio*
*James E. Schnitz, University of Texas at San Antonio*

This study identifies the nature of a dual labor market in higher education consisting of positions that may lead to tenure and those that do not. The authors identify evidence of recent increases in the proportion of nontenure track positions, interpret this development, and assess the implications for higher education.

The paper proceeds in five sections. First, the authors describe the conditions in the academic marketplace that led to the establishment of nontenure track positions. Second, they employ dual labor-market theory to interpret this development and to locate primary and secondary sectors in the labor market distinguished by different working conditions and expectations. Third, they view this development as regressive vis-a-vis the 1940 *Statement of Principles*, of the American Association of University Professors (AAUP) and, hence, argue that it undermines significant aspects of the tenure system. Fourth, they assess the qualitative impact of this development on institutions of higher education and, using the analog of the 19th century German university, conclude that there is a point at which the number of nontenure track positions in a particular institution will have a deleterious impact on the scholarly functions of the university. Finally, they indicate certain inadequacies in the extant data base on higher education that render statistical analysis of the dual labor market difficult, and they suggest refinements in the data base that would ease the discernment of developments of this sort.

***Strategic Decision Making In Colleges and Universities***
*Robert C. Shirley, State University of New York at Albany*

The so-called golden age of higher education is over, to be sure, and the future success (perhaps even survival) of many institutions will depend on the strength of their planning efforts. Unfortunately, many planning efforts are fragmented in nature, i.e., actions designed to increase enrollments, trim the fat, and address other long-term issues often are undertaken serially and without reference to a larger, decision-focused paradigm.

The planning literature developed for the business sector over the past few years has focused on the process by which strategic decisions are (or should be) made by a firm. Strategic decisions are those choices which, once made, define the relationship between the firm and its environment; by making these strategic decisions as the first step, all subsequent

planning efforts can proceed in a coherent fashion, consistent with the broader directions of the firm. The six strategic decisions which must be made initially by a corporation are: (1) basic philosophy and values, (2) goals and objectives, (3) product mix, (4) customer mix, (5) geographic areas to be served, and (6) competitive emphasis (the basis of a differential advantage).

This paper identifies the strategic decisions which should be made by a college or university prior to the development of various types of implementation plans (e.g., admissions, budgetary). The steps involved in strategic decision making are discussed, focusing especially on the matching process whereby various external and internal influences must be balanced. Finally, the paper discusses ways by which an institutional research office can facilitate the process of strategy formulation. The case of an educational institution is compared to other types of organization (e.g., business, hospital) throughout the process.

## 12-F CONCURRENT CONTRIBUTED PAPER SESSION

*William P. Fenstemacher, Chairperson, University of Massachusetts-Boston*

### *PERC and NCHEMS: A Comparison*

*Ernest G. Palola, Empire State College*
*J. Frank Armijo, National Center for Higher Education Management Systems*

Great pressures exist in higher education today to provide more sophisticated and comprehensive data on academic institutions and their performance. In response to these pressures, two systems of accountability obtain increasing attention. Each system was designed and developed to respond to what was perceived as a different side of a common problem. NCHEMS arose when the strategy to accountability stressed cost comparisons. Only recently has this approach focused on outcomes for students and others. By comparison, PERC arose when state officials and institutional administrators began to realize the shortcoming of a cost-only approach to accountability. PERC begins with questions about program outcomes and program effectiveness and then asks about program costs.

These are a few of the more general points of comparison between PERC and NCHEMS. Several other areas also are covered, including: longitudinal and cross-sectional data, qualitative and quantitative data, individual and aggregate data, data for individual institutions and interinstitutional comparisons, reports written for general audiences and those tailored to separate audiences.

The key to the paper is the strength and weaknesses for institutional decision makers in selecting one or the other or some combination of the approaches.

### *The Human Dimension: Balancing People Needs and Resources*

*Harold C. Howard, Eastern College*

For educational institutions, the most costly resource is human talent. All too often, the greatest waste of an organization is the waste of human resources. Conservation in this area must be viewed within the perspective of higher levels of morale and motivation. This paper focuses on the balancing of accountability and/or stewardship on one hand and the need for institutional vitality and individual renewal on the other. It is also a report of a people-oriented research project by one college.

The author's thinking is based upon certain assumptions having to do with people and organizations. First, the balancing of the budget and holding the line on expenditures cannot be perceived as the sole solution, particularly if it leads to an erosion of morale and academic quality. People represent the real vigor of an institution. As such, institutional renewal is inextricably linked to individual renewal. For this reason, faculty and staff development opportunities take on added importance in a time of declining faculty mobility, budget stringencies, and financial pressures. Finally, the nature of the business of education requires a structure that, in itself, works against communication. This is reflected in the variety of disciplines with their individual vocabularies and, in recent years, in the expanding support services administrative pyramid.

Eastern College is making available to faculty, administration, and staff a management language called Model-Netics.[1] The intent is to improve communications and, through the teaching of management concepts, make possible more effective participation in the decision-making process.

[1]A registered trademark of the Main Event Management Corporation.

***Impacts of Workshops for Instructional Improvement: The Results of an Evaluation of a Component of a Faculty Development Program***
*John M. Braxton, Wittenberg University*

This study reports the impacts of a series of workshops for instructional improvement conducted by the Faculty Development Organization of a private, undergraduate institution of 2300 students.

The impacts delineated are the results of an evaluation of these workshops. The impacts examined were extracted from the expected outcomes of various instructional improvement programs delineated by Gaff. The impacts selected for analysis were (a) the development and use of new techniques or methods of instruction and (b) the development of favorable attitudes toward teaching and learning by faculty.

These impacts were operationalized through a questionnaire designed for this evaluation. An overall measure of the extent to which new techniques or methods of instruction were developed was created for the summation of responses to four equal-appearing items of the questionnaire. Two Likert-type questions were used to provide an indication of the degree to which favorable attitudes toward teaching and learning were developed.

The survey instrument was administered to the population of 65 faculty who had participated in one or more of the workshops for instructional improvement. A total of 44 completed forms were received for a response rate of 68%. The results tend to indicate that the workshops did have some impact upon the faculty participants. Most faculty did become involved in the process of developing new methods or techniques of instruction. Moreover, more favorable attitudes toward teaching and learning were developed.

## 12-G CONCURRENT CONTRIBUTED PAPER SESSION

*Joseph G. Rossmeier, Chairperson, Northern Virginia Community College*

***Academic Advising and Counseling: A Computer-Assisted Enhancement***
*Charles C. Ehl, Framingham State College*

Quality academic advising programs must provide pertinent and current advisee data and information to the advisee. Regrettably, the development of informational delivery systems to facilitate the academic advising process proves to be a formidable task on many campuses, either because of institutional system priorities or the sophistication and completeness of the institutional student data base.

As a consequence, adviser informational needs are serviced only when the adviser confronts the student in an advisory encounter. As a result, the valuable time of the adviser and advisee is squandered while necessary records are being secured. Professional academic advisers are sidetracked, and students are unnecessarily delayed in getting their answers.

While the timeliness of providing advisee information is critical, so also is the quality of the information provided. It must be complete and current. Since the institution frequently changes its curricula while the student is enrolled, such changes often significantly impact the character of the academic encounter. A substantive academic advising program must provide each adviser with timely, accurate, and complete information on the enrollment status of all advisees. Of course, each student should have this same enrollment information for planning purposes. Lastly, the student must be made aware of curriculum developments and opportunities that occur while the student (advisee) is in residence.

This paper describes the ongoing development of a computer-assisted academic advising program. The methodology inherent in the computer-assisted portion of this program is transferrable to other institutions with comparable computerized student data bases.

***Economy through Professional Standards and Practices: AIR's Role in Making THEM Accountable Too***
*Peter H. Fitzgerald, University of Kentucky*

Organization theory supports our generalized feeling that bureaucracy is engulfing us, that colleges and universities, as Veblem predicted in 1916, have become servants of organization first and freedom of inquiry and exchange of ideas second. Our uneasiness is signalled by recent surveys on paperwork and by declamations on the intrusions of bureaucracies into our affairs.

The purpose of this paper is to propose a role for AIR in responding to our collective problem: the cost in dollars, in professional time, and in spirit of providing grist for the bureaucratic mill.

The three salient characteristics in the most widely used interpretations of the term "professional" are: (a) characterized by a high degree of specialization, (b) requiring a long educational process, usually leading to certification, and (c) self-regulating. AIR needs to find vehicles to insure the development of professionalism in the exchanges that occur between institutions and public agencies in the development of information for state and federal policy making.

AIR should establish a Committee on Professional Standards as a means for review and regulation of requests for information and analysis of higher-education activities from both institutional and public policy-making agencies. This committee should serve as a panel to police the application of standards in institutions and policy-making offices and agencies. The theory is that the presence of an external panel on standards, composed of recognized professionals and willing to publish its findings, would exert a positive influence on policy makers and researchers alike.

***Institutional Research as a Service Function of Higher Education: A Consortium Arrangement with Public School Districts***
*Thomas Horne Saterfiel, Mississippi State University*

Institutional research traditionally has been associated with institutions of higher learning and with the techniques and procedures which aid such institutions in obtaining data for decision making. However, with the flood of technical development and the rising demands for accountability, the administrators of public school districts have sought the help afforded through institutional research practices.

Some larger school districts have been able to develop their own institutional research operations, but others have found it more advantageous to form a consortium to purchase these skills. Mississippi State University, serving 18 public school districts in Mississippi, has served as the center for such a consortium. In general, each school district pays a membership fee for a basic set of services and then is allowed to purchase additional services at a set fee.

The major thrust of the local projects has been toward assessing public opinion toward schools, examining historical data to describe programs, and establishing research designs to evaluate the effectiveness of innovations. In addition, some schools use the consortium's services to help train local staff in research and evaluation skills. The consortium has worked together on research investigating factors traditionally associated with school accredition studies. Member school districts are currently exploring the possibility of a cooperative management information system using the university's computing center.

Such consortium arrangements afford universities an excellent service outlet to public schools through the medium of institutional research.

## 12-H CONCURRENT CONTRIBUTED PAPER SESSION

*Larry H. Litton, Chairperson, Carleton College*

***Impact of Federal Intervention on Higher Education***
*Ronald H. Stein, State University of New York at Buffalo*

Within the past two years, the presidents of three prominent universities have presented major addresses on the Impact of Federal Intervention on Higher Education. During 1976, five

different national educational organizations studied various dimensions of this problem. Recently, the Commission on Federal Paperwork devoted a section of its report to the problems of education. Additionally, various federal legislation has been introduced in an attempt to get a legislative foothold on this problem. Also, Secretary of Health, Education, and Welfare Joseph A. Califano, in a letter to college presidents that announced the launching of "Operation Common Sense" stated: "As participants in many of the Department's program activities, you and your colleagues know at first hand the costs in time, understanding, cooperation and effective program operations of excessively detailed, burdensome, complex, and unintelligible regulations."

The purpose of this paper is to measure the impact, both quantitatively and qualitatively, of recent federal legislation and regulations on higher education. The paper has adopted the following modus operandi: First, it considers a number of arguments which are posited in defense of federal intervention, including the fact that the federal government contributes 80 percent of all funding through 300 programs in 25 federal agencies. Second, the present depth and breadth of federal intervention in higher education is studied. Among the recent programs to be considered are these: Section 504 of the Rehabilitation Act of 1973, Copyright Law of 1977, Title IX, Health Professions Educational Assistance Act of 1976, Affirmative Action, Veterans Administration, Immigration and Naturalization Service, Family Educational Rights and Privacy Act of 1974, and Occupational Safety and Health Act. Third, there is an attempt to evaluate the costs, both direct and indirect, financial and programmatic, of these federal programs and regulations to institutions of higher education. Fourth, the paper considers the implication of federal intervention on the total educational enterprise of the institution. Fifth, there is discussion of alternative approaches which the federal government could pursue to accomplish the same ends. Finally, a prognosis for the future is offered.

***Student Learning in the Open University—the Provision of Diversity in a Distance Education System***

*Alistair R. Morgan, The Open University of the United Kingdom*

The implicit assumption in the design of The Open University's correspondence texts is that all students learn in a similar manner. The correspondence texts are structured to incorporate aims, objectives, and self-assessment questions so as to provide definitive teaching material.

The introduction of project-based learning provides for a diversity of learning styles as the students take some responsibility for designing their own learning experiences.

This paper examines project-based learning from three aspects: (1) theoretical analysis of the curriculum design of project activities, (2) the students' learning experiences investigated from both a qualitative and quantitative research approach, and (3) implications for institutional provision and possible changes in resource allocation as a result of these research findings.

***Academic Entrepreneurs in University Decision Making***

*Demetris Deniozos, Conference of Rectors and Presidents of the Swiss Universities*

This paper presents some results of a research project on university management. It is based mainly upon the study of real cases of decision processes in Swiss universities. The central idea developed is that the entrepreneurship of some professors in academic affairs has an important impact on decision outcome and therefore on the orientation of the university development. The entrepreneurship is principally examined in its behavioral aspects, inside and outside the university, and placed in the framework of a reform under study concerning federal funding and interstate coordination. The professorial entrepreneurship in managerial affairs is also examined as a centripetal force, countervailing to the centrifugal tendencies of the purely academic activities. The study was undertaken when the author was working at the Federal Institute of Technology, Lausanne, Switzerland.

## Time Period 13 Tuesday 3:45–5:15 p.m.
## AIR Business Meeting

*Warren W. Gulko, President, The Association for Institutional Research*

**Wednesday, May 24**

## Time Period 14 Wednesday 8:30–9:30 a.m.
## Special Interest Groups

### 14-A PLANNING A NEW FACILITIES SURVEY— A FEDERAL CASE STUDY

*Theodore H. Drews, Chairperson, National Center for Education Statistics*
*James D. Bennett, U.S. Office for Civil Rights*
*Charles I. Griffith, U.S. Office of Education*
*Charles Wheeler, North Carolina State Commission on Higher Education Facilities*
*Rolf M. Wulfsberg, National Center for Education Statistics*

Major efforts by the U.S. federal government to survey higher education facilities date from the mid-1950s with the surveys by the National Science Foundation and the Office of Education. Standardization of terminology and data categories on a national level date from 1967 with the first *Higher Education Facilities Manual*. The involvement of the states was invited by the federal government in 1968 and resulted in the new facilities data systems used jointly by the states and the federal government in the early 1970s to support and evaluate the Higher Education Facilities Act. In 1977, it became necessary for the Office for Civil Rights to acquire information on the accessibility of facilities to the physically handicapped. Instead of developing a new system and new measures, it was decided to utilize the existing data system, the existing Higher Education General Information Survey (HEGIS), and the existing state-owned corporation (the Higher Education Facilities Services, Inc.) which had operated the previous surveys. This multi-agency effort has multiple objectives and new statistical controls. The session describes this new effort.

### 14-B BUSINESS OFFICERS

*Clarence Scheps, Chairperson, Tulane University*
*R.L. Anderson, University of Texas System*

The financial condition of higher education currently and in the immediate future is explored and reviewed from the points of view of both the privately-controlled and publicly-controlled college and university. The various resources available to the two types of institutions and prospects for their continuation in the 1980s is discussed. Finally, general conclusions with respect to the financial health of higher education in the 1980's are advanced.

### 14-C SHEFO/NCES COMMUNICATION NETWORK PROJECT

*Jane N. Ryland, Chairperson*
*SHEEO/NCES Communication Network Project*

There was discussion of the origin of the Network and its general objectives. The Network facilitates coordination between federal and state data collection activities by opening communications between the National Center for Education Statistics and the states and by providing an interstate information exchange. Recent Network activities have resulted in advance notice of NCES data collection plans and opportunities for state input in developmental and planning processes at the state level. Considerable interest was expressed by session participants in being informed of Network activities by their state representatives.

## 14-D INTERNATIONAL ACTIVITIES OF THE PROFESSIONAL VISIT PROGRAM

*F. Craig Johnson, Chairperson, Florida State University*
*Stefan D. Bloomfield, Oregon State University*
*Mary P. Martin, Florida State University*

The objective of this special interest group session is to inform interested AIR members about the possibilities of professional visits to other members in their own country and abroad. Two members, currently actively involved in professional visits, share their experiences and answer questions.

The first exchange visit involves an associate director of institutional research in Oregon and a counterpart in Belgium. The exchange of jobs for one year provides one pattern other members may wish to explore. The second exchange involves an internship program for an American doctoral student who will spend four months abroad—a portion of the time in Paris helping to plan an international meeting and the remainder at the Loughborough University of Technology in Great Britain.

A brief presentation is followed by an open discussion.

### Time Period 15 Wednesday 9:30–10:45 a.m.
### General Session

*Marvin W. Peterson, Chairperson, University of Michigan*

## 15-A GENERAL ASSEMBLY ADDRESS

***The Uneasy Alliance: The State of Government-University Relations***
*Jack W. Peltason, President, The American Council on Education*

## 15-B PRESENTATION OF THE SIDNEY SUSLOW OUTSTANDING PAPER AWARD

### Time Period 16 Wednesday 10:45 a.m.–12:15 p.m.
### Concurrent Sessions

## 16-A MARKETING APPROACHES TO INSTITUTIONAL PLANNING

*Fred Thompson, Chairperson, University of British Columbia*
*Bruce H. Allen, Kent State University*
*Dennis Johnson, Johnson Associates, Inc.*
*DeForest L. (Woody) Trautman, University of Toledo*

During the recent period of rapid institutional expansion, production-oriented planning tools, such as the RRPM of the National Center for Higher Education Management Systems, proved useful guides to institutional development. Now, however, it would appear that the emphasis should shift from production planning to product-market planning, with changes in the width (number of services offered by the institution), depth (average number of items or variations offered within each product class), and diversity (how different the various services are in end use, production method, distribution channels, etc.) of the curriculum evaluated in terms of their probable effects upon total enrollment and, therefore, upon total revenue.

This seminar deals with strategic product planning in an uncertain, competitive environment, stressing the concepts of optimal marketing mix, product life cycle, product mix strategies, the growth/share matrix, and resource adjustment.

## 16-B ASSURING ACADEMIC STANDARDS AND QUALITY

*Cameron L. Fincher, Chairperson, University of Georgia*
*Ernest G. Palola, Empire State College*
*Joe L. Saupe, University of Missouri*

This seminar looks at the problems and issues of academic standards in a period of test score decline and grade inflation. Test score decline has received an abundance of attention from national testing agencies, the popular press, and the general public. Grade inflation, as an indicant of erosion in educational standards, has received less attention but raises many of the same questions concerning the maintenance of academic quality under conditions of rapid social change.

Three perspectives are provided. The problem of quality and standards is viewed from the standpoint of statewide planning and management; in terms of institutional responsibility, and from an instructional perspective. Each perspective is presented within an institutional research context and reacted to by a former president of the Association for Institutional Research.

## 16-C ACADEMIC PROGRAM REVIEW AND EVALUATION: ISSUES AND TECHNIQUES

*Donald C. LeLong, Chairperson, University of Michigan*
*Richard B. Heydinger, University of Minnesota*
*R. Sue Mims, University of Michigan*
*Nick L. Poulton, Western Michigan University*

Increasingly, institutions of postsecondary education are engaging in more systematic evaluation. For many institutions the experience is not totally satisfactory: the purposes of evaluation are not always clear; it is more difficult and more time consuming than anticipated; and results are not as useful and timely as expected.

Often, attention is devoted primarily to evaluation methodology and to the design and execution of specific evaluations. That is clearly important; however, the hypothesis of this seminar is that many efforts to conduct continuing program review and evaluation fail, or are less successful than they might be, because inadequate attention is paid to planning and managing the overall process. The purpose is to address issues and techniques related to three different stages in the development and operation of a systematic, ongoing process for academic program review at the institutional level: (a) determination of the needs for program review and establishment of objectives, (b) design and implementation of the review process, and (c) establishment of linkages between evaluation and academic decisions, e.g., planning and budgeting decisions.

## 16-D SMALL COLLEGES: A COOPERATIVE APPROACH TO ANALYTIC DATA

*William A. Shoemaker, Chairperson, Council for the Advancement of Small Colleges (CASC)*
*John M. Newby, Spring Arbor College*

This session describes the CASC Planning and Data System which has been designed by and for practitioners and focuses on campus-based management information and planning needs. Nine of its eleven modules provide hard data: student recruitment, student financial aid, student attrition, instructional program costs, faculty activity, personnel and salary, library costs and services, fund raising, college goals and climates. Two modules feature soft information: a marketing approach to program development and student learning outcomes.

These eleven modules can be used independently, but they are designed as a system for synergistic impact. Diagnosis, cooperative and comparative data services, users manuals, consultation, and a comprehensive service combining all of these are available through the CASC Planning and Data System.

## 16-E INFORMATION EXCHANGE AMONG MAJOR RESEARCH UNIVERSITIES

*James R. Topping, Chairperson, National Center for Higher Education Management Systems*
*Mark Meredith, University of Colorado*
*Adrian H. Harris, University of California, Los Angeles*
*Peter J. Czajkowski, University of Illinois*

Major research universities (MRU's) have a continuing need for comparable information from peer institutions. Exchange of information among MRU's may take the form of an informal ad hoc exchange or, alternatively, may be formalized to include a discrete set of peer institutions exchanging data on a routine basis. Three exchange efforts among MRU's are described in this session. One of them, still in its conceptual stages, focuses primarily on information needed for program review. A second effort is an attempt to develop and exchange programmatic full-cost information in a comparable format. The third effort involves an ongoing data exchange of faculty salary, teaching work load, and related operational data used for comparative studies by individual institutions. Participants have an opportunity to discuss with the presenters the strengths and weaknesses of the three methods and raise pertinent questions in regard to their own needs for information exchange.

## 16-F INFORMATION SUPPORT FOR INSTITUTIONAL PLANNING

*Carl R. Adams, Chairperson, University of Minnesota*
*Richard F. Wilson, University of Michigan*
*Eric A. Hillman, University of Calgary*

## 16-G SOUTHERN ASSOCIATION FOR INSTITUTIONAL RESEARCH

*Gerald W. McLaughlin, Chairperson, Virginia Polytechnic Institute and State University*
*E.F. Schietinger, Southern Regional Education Board*
*Alfred L. Cook, Institute for Services to Education*
*Richard Howard, West Virginia University*
*Suzanne W. Larsen, University of Tennessee*
*Joseph T. Sutton, University of Alabama*

The South has made rapid strides over the last several decades in the field of higher education. At the same time, data from NCES, the *Chronicle*, M.M. Chambers, and other sources seem to indicate our region lags the nation in higher education. It is important that we now assess the unique characteristics of our region. This assessment consists of three major topics: educational programs, financial support, and federal programs. The format in each area includes discussions on past trends, assessment of the current situation relative to the rest of the higher education community, and an extrapolation of what the future could and should be like for the region. A final presentation focuses on current needs models and alternative studies.

## Time Period 17 Wednesday 2:00–3:30 p.m.
## Concurrent Contributed Papers Sessions

### 17-A EVALUATING ACADEMIC CHANGE

*W. Sam Adams, Chairperson, University of Wisconsin-Oshkosh*

***University Support Systems Necessary to Implement Institutional Change***
*Ellen C. Armstrong, Rutgers University*
*Marie D. Dykes, Wayne State University*

If an institutional change is to be successful and permanent, three areas of responsibility must be accounted for during the implementation process: (1) information, (2) power—especially reward and expert power, and (3) adaptability—that is, sensitivity to external reaction and necessary modifications.

Which functional areas of a university are best suited to fulfill these responsibilities depends on the constituency in question. For the clients (parents, prospective employers, etc.), public relations, admissions, and placement are all important. For students, the registrar's office has great influence for both instructional and noninstructional innovations.

The faculty senate or its equivalent is the best formal information channel for faculty, but it may not have the power either to force faculty to participate in the innovation or to reward them for doing so. For the administration, the president may fulfill all three responsibilities her or himself or may rely on an administrative council or executive committee.

Because support services are instrumental in implementing institutional change, they should also be involved in its planning. Research at the University of Wisconsin-Oshkosh indicated that greater representation of the support services among the decision makers resulted in greater success in achieving the goals of the innovation. The areas most involved in the implementation of an innovation are themselves very susceptible to being changed, even when they were not the innovation's original focus. At the University of Wisconsin-Oskosh the managerial, production, and adaptive subsystems were most heavily involved in planning and implementing the innovation and experienced the most changes as a result of it.

***Intensive Scheduling: The Evidence for Alternatives in Course Scheduling Patterns***
*Richard J. Doyle, Central Michigan University*

Intensive scheduling is the offering of undergraduate or graduate courses in significantly compressed time sequences. The Institute for Personal and Career Development, the external degree-granting arm of Central Michigan University, for example, offers complete 3-semester-hour courses, consisting of at least thirty-six student-instructor contact hours, in as little as two weekends.

This paper summarizes the efforts which have been made to investigate the effects of intensive scheduling at all educational levels, presenting the experiences of the institute to investigate and validate this alternative method of scheduling. These efforts, directed by the institute's Office of Research and Evaluation, include case studies of intensively scheduled courses, surveys, and experimental studies. The results of all of these enable us to conclude with considerable confidence that: (1) students enrolled in intensive courses will perform at least as well as, and possibly better than, students who enroll in traditionally scheduled courses, when the usual measures of cognitive achievement are utilized, (2) intensive scheduling will interfere neither with the instructor's ability to prepare for and present the courses nor with the student's ability to learn the material, (3) although faculty and students who elect intensive courses will keenly perceive the time constraints imposed by the intensive format, they will respond enthusiastically to such scheduling, and (4) increased student-student and student-faculty support will develop among those who are enrolled in intensive courses.

Suggestions for further research are presented and the implications of these findings for scheduling courses in traditional as well as nontraditional postsecondary institutions are discussed.

***Can You Make Faculty Staff More Efficient?***
*Judith Riley, The Open University of the United Kingdom*
*Brian Francis, The Open University of the United Kingdom*

The authors spent the academic year 1976–77 running a study of the methods by which Open University faculty design new courses for their students. The paper describes the multiple aims of this study: (1) to improve the quality of the course materials, (2) to increase the efficiency with which they were produced, and (3) to guide the allocation of new posts by enhanced understanding of productivity rates of staff in the different subject departments.

The main problems were seen to be the balancing of these diverse aims and the selection of an appropriate method for the study which could both tackle the complexity of the problem and be acceptable to the faculty. The paper also describes the method that was adopted and discusses it in relation to several different research traditions. Initial reactions to the results of the study, which proved highly controversial, indicate that it has had a significant influence in most schools of the university. It has also become the first of a series of studies of the operation of different areas of the Open University.

## 17-B EVALUATING INSTRUCTIONAL EFFECTIVENESS

*Richard B. Heydinger, Chairperson, University of Minnesota*

***Perception of Locus of Control as a Predictor of Attitude toward Students' Evaluation of University Faculty***
*Emmett Kohler, Mississippi State University*
*Melodie E. Christal, Mississippi State University*
*Joyce Hickson, Mississippi State University*

***The Relationship between Students' Evaluations of Instructional Effectiveness and Faculties' Self-Evaluations: A Validity Study***
*H.W. Marsh, University of Southern California*
*S.P. Kesler, University of Southern California*
*J.U. Overall IV, California State University*

Faculty who taught two courses during the spring 1976 semester evaluated their own teaching in each of the two courses as well as being evaluated by their students. These faculty felt that quality of teaching should be given more importance and that students' evaluations were useful for the faculty themselves, but faculty expressed reservations about both the validity of the student ratings and their use in tenure/promotion decisions. In spite of these reservations, there was considerable student-faculty agreement. Separate factor analyses of the two sets of ratings both supported the six evaluation factors which had previously been identified, indicating student-faculty agreement on the dimensions which underlie ratings of effective teaching. Validity coefficients, correlations between student and faculty ratings on the same evaluation factors, varied between .33 and .67 (median $r = .49$). The difference between mean faculty self-evaluations, averaged across faculty, and mean students' evaluations were small; the median evaluation was the same for both groups. Students and faculty agreed upon the teaching behaviors which were more descriptive and less descriptive of the faculty as a whole ($r = .77$). Finally, when faculty indicated that their teaching was "most effective" in one course and "less effective" in another, students' evaluation of the most effective courses were higher on all evaluation scores. These findings offer strong new support for the validity of students' evaluations, suggest the possible usefulness of faculty self-evaluations, and should be particularly helpful in overcoming faculty resistance to the use of students' evaluations.

***Student-Faculty Interactional Settings and Their Relationship to Predicted Academic Performance***
*Ernest T. Pascarella, University of Ilinois-Chicago Circle*
*Patrick T. Terenzini, Syracuse University*

Both Chickering (1969) and Spady (1970) have theorized that student informal interaction with faculty will have an independent and direct influence on students' academic performances. In a test of their models, this study investigated the relationship between the frequency of

student-faculty informal interaction and over- and under-achievement during the freshman year. Residual achievement was computed by subtracting freshman-year cumulative grade point average, predicted from student pre-enrollment characteristics, from actual cumulative grade point average. The resultant residual scores represented achievement independent of entering student characteristics. Positive residuals represented higher-than-predicted achievement (over-achievement) while negative residuals represented lower-than-predicted achievement (under-achievement). Residual achievement scores were then regressed on the frequency of six types of nonclassroom student interaction with faculty. Interactions focusing on intellectual or course-related matters and conversations about students' careers made the only significant predictive contributions. The findings suggest further, however, that the relationships between residual achievement and both categories of interaction are of a diminishing returns nature. In both categories of interaction the initial interactions were associated with the largest increases in residual achievement. As the frequency of interaction increased, the incremental increase in achievement tended to diminish.

***Long-Term Stability of Students' Evaluations of Instruction: A Longitudinal Study***
*J.U. Overall IV, California State University*
*R. Hughes, California State University*
*H.L. Unterbrink, California State University*
*H.W. Marsh, University of Southern California*

The purpose of this study was to provide insight into the question of long-term stability of students' evaluations of instruction. For, if students evaluate their instructors differently after having a period of time to reflect on class experiences, then the usefulness of such ratings for instructional, informational, or administrative decisions may have to be re-examined.

This study focused on the extent and nature of relationships between in-class and retrospective ratings. Ratings given by alumni one year after program completion were compared with ratings given by these same individuals subsequent to course completion.

Large and statistically significant correlations were obtained between in-class and retrospective ratings ($r$ = .51 to .71 on all items; $p < .001$; $n$ = 419). Furthermore, while in-class/retrospective rating patterns were found to be consistent, the judgments rendered by students were harsher in retrospect. Finally, those who earned higher grades were not found to have systematically rated their instructors differently on the retrospective evaluations than those who received lower grades.

These results provide strong support for the stability and usefulness of students' evaluations. Students did not, on the average, rate instructors differently in retrospect; they were generally consistent in their ratings; and, their course grades were not found to influence their retrospective ratings.

## 17-C FORMULA FUNDING AND STATE-LEVEL FINANCIAL PLANNING

*William F. Lasher, Chairperson, University of Texas at Austin*

***Adequacy of Budget Formulas for Balancing Institutional Needs and Resources in Non-Growth Periods***
*John L. Yeager, University of Pittsburgh*
*Cynthia A. Linhart, University of Pittsburgh*

To reduce political uncertainties, distribute funds equitably, provide an adequate level of funding, and have a basis for accountability, certain states have developed budget formulas to derive estimates of the fiscal requirements for public, higher educational institutions. These budget formulas are typically oriented toward growth conditions. However, projections of growth in higher education institutions show, at best, a period of stabilization and, in some cases, decline. The question can then be raised: will budget formulas be able to estimate an adequate funding level for higher education institutions, given the projected conditions of non-growth?

Formula adequacy involves three factors. Central to the question of adequacy is the correspondence of the formula to the actual cost behaviors being estimated: variable, fixed, or mixed costs. A second consideration is the extent of coverage provided of the various activities of an institution. A third factor in the consideration is the specific method of estimating resource needs: work load, staffing standard, and percentage base.

This paper focuses on the factors which influence adequacy in formula budgeting. Using the framework of five selected state budget formulas, relevant cost information and variables representative of an hypothetical institution were established. Conditions were then varied to reflect growth, steady state and decline periods, and selected budget formulas were applied under these conditions. Budget estimates for the institution were then compared relative to adequacy under the varied growth conditions and were discussed relative to the factors affecting adequacy.

***Long-Range Financial Planning in Minnesota: Exploring State-Level Issues, Problems, and Alternatives***

*David G. Monical, Minnesota Higher Education Coordinating Board*

Faced with the prospect of declining enrollments and assuming minimal real growth in state resources available to postsecondary education, many problems emerge in the financing of public postsecondary education. It is unlikely that system and institutional resources can be reduced in a manner symmetrical to their increase as the fixed and semi-fixed nature of many resources impair institutional and system flexibility. The state-level problem becomes one of determining an appropriate set of funding mechanisms which take into account the diverse missions of institutions but, at the same time, are sensitive to fluctuating enrollment levels. The mechanisms and formulas will need to move beyond the traditional linear funding approaches and exhibit marginal or incremental characteristics which more accurately represent actual financing conditions.

In order to explore the issues and address the problems facing the financing of Minnesota postsecondary education, a long-range financial planning model has been developed by the staff of the Minnesota Higher Education Coordinating Board. The model is designed to determine the extent to which alternative general financing policies, and specific funding formulas, affect system and state-level expenditures and financing patterns. This model helps assess the general financial impact of projected enrollment trends under current policy guidelines while also simulating alternative sets of financing guidelines and estimating their effects on overall expenditures and financing patterns.

***Using Comparative Data in the Development of a Funding Model for the State of Michigan***

*Thomas M. Freeman, Michigan State University*
*Jacqueline Skubal, Michigan State University*

During 1976–77, the Michigan Higher Education Task Force, a group of representatives of the executive and legislative branches of state government and fifteen public four-year institutions, completed the first efforts toward developing a comprehensive funding model for the State of Michigan. During 1977–78, the efforts are directed toward refinement of the model.

The Instruction/Academic Support Subcommittee solicited the best currently available data from a number of states and individual institutions to be used in refining the staffing ratios and costs of instruction in the model. The response to the inquiry was very good. Data were provided by fifteen state systems and forty additional individual institutions. The issue of comparability was dealt with by the subcommittee upon receipt of the data. The experience of a data collection effort in which each institution or state system was allowed to display data according to its own format and definition produced some interesting results, namely, that the structure, focus, definitions, and other characteristics of cost or work-load data vary considerably even when the influence of WICHE/NCHEMS type uniformity is present or utilized.

This paper presents an analysis of the subcommittee's efforts to use the data collected. It includes an outline of the various forms under which the data were submitted, a discussion of the procedures proposed to aggregate and disaggregate the data to make it usable and the procedures actually chosen, a summary of the various analysis implications of the data as

presented, and a commentary on the state of the art of cost analysis and work-load measurement among states and individual institutions.

## 17-D CHANGES IN STUDENT COURSE-TAKING PATTERNS

*Jerry J. Baudin, Chairperson, Louisiana State University*

***Impact of Fee Schedules on Average Student Credit Hour Load***
*Betty Tilton, Florida State University*
*Ilona Turrisi. Florida State University*

The impact of changing fee schedules on average student loads is examined. The two types of schedules used in the study are the per-credit-hour fee schedule and block fee schedule (set amount for full-time students regardless of number of hours). The major variables considered in the study are student level and credit hour load.

A change in fee schedule (from block fee to credit hour fee) effects an irreversible change in student course loads. Examination of average student loads by level of student indicates that the average load decreases under the credit hour fee schedule. Tracking of the same students from one year to the next, however, produces a less drastic change. Thus, students who entered the university under the block fee system tend to carry higher loads throughout their university careers than do those who entered under the credit hour fee system. The credit hour loads for some schools also tended to stay more stable.

With the possibility of returning to a modified block system at hand, a survey of student preference was taken to determine (a) which of the proposed systems was preferred and (b) what impact, if any, the fee structure had on the number of hours carried. In general, students indicated that personal preference rather than cost dictated the number of hours they carried. An overwhelming majority were satisfied with their progress toward completion of their degrees. Of the students expressing a preference for a fee schedule, only 52% preferred the block type vs. 48% who preferred the current credit hour schedule.

***Sources of Change in Student Credit Hour Demand in Multi-Unit Colleges and Universities***
*David J. Berg, University of Minnesota*

When changes occur in the number of credit hours demanded of a teaching unit, a clear understanding of the sources of change may be of assistance in policy making. Acceptable methods of making inferences about sources of variance in credit hour demand are not intuitively obvious, nor are the limitations of even the simplest approaches.

The analysis discussed in this paper is concerned with the sources, not the causes, of variance. To know that the principal source of a decrease in credit hours taught is a decrease in students registered in the teaching college will not explain why less students are registered in that college.

The sources of variance, however, can be of great policy interest and can make the search for causes more efficient. Often decision makers are unaware of the true sources of variation in teaching demand. Planning regarding curricular structure and recruiting may take different directions if the true nature and relative strength of the various mechanical sources of load changes are understood.

The mechanistic sources of load change are three: enrollment, mean load per student, and proportion of that load being carried in the teaching unit being studied. These three mechanistic sources of change can be analyzed in terms of various student populations, e.g., majors in a department under study, nonmajors in the same college, and all other students in the university. Subject to data availability, other groupings may be used.

The desired analytic outcome is the absolute and relative influence of any defined combination of student population groups with the mechanistic sources of load change.

***Interdisciplinarity: Policies and Practices***
*Nadia Assimopoulos, Université de Montréal*
*Charles H. Belanger, Université de Montréal*

This study was conducted to assess the interdisciplinary movement observed in programs at

the Université de Montréal during a three-year period. More specifically, the main purpose of this research report was three-fold: (1) to determine the magnitude of the range set up by departments in their degree program structures to give students an opportunity to take courses outside their basic disciplines, (2) to assess the degree of students' responsiveness to utilize course offerings outside their basic disciplines, and (3) to measure the ability of departments to attract nonmajor students from related and foreign disciplines.

Twenty programs representing five branches of study were analyzed to determine the relationship between theoretical interdisciplinary provisions and actual composition of induced course load matrix (ICLM) outputs. The analysis was furthered to find out whether there was an identifiable pattern of attractiveness between related and foreign disciplines. The results of this study suggested a more insular trend taking shape among academic disciplines and professions.

## 17-E CONCURRENT CONTRIBUTED PAPER SESSION

*Nick L. Poulton, Chairperson, Western Michigan University*

***Beyond Information for Decision Making: An Institutional Researcher's Introduction to Evaluation Research***
*Mark D. Johnson, Allegheny College*

The most critical need in the field of institutional research is no longer the accumulation of new data but the translation of available data into policy-relevant information. This presentation focuses on an important, but largely untapped, framework for the analysis of institutional data—that is, evaluation research. Specifically, the author discusses the nature and purposes of evaluation research, the critical two-way relationship between the evaluator and the decision maker, the interaction between evaluation strategy and research design, and the resources available to the insitutional researcher who wishes to develop expertise in the area of evaluation research.

***Toward a Rational Information System for the Small College***
*William Toombs, Pennsylvania State University*
*Mary Ann Sagaria, Pennsylvania State University*

The confluence of two trends—technological refinement, notably developments in data processing, and policy elaboration mandated by federal and state information needs—accentuates the need for automated record keeping. At the same time, it emphasizes the value of general understanding among all users. Dilemmas about automated information systems for small colleges enrolling 300 to 700 students are further aggravated by organizational and structural conditions. This paper reports a project which addressed these issues at a small private denominational junior college. The approach assumes that key decision makers, provided with understanding of the present system beyond personal perceptions and observations, will select more wisely the equipment needed for automated operations.

A team from the Center for the Study of Higher Education, The Pennsylvania State University, developed a three-step approach: (1) description of current information inventory, (2) information flow and task environment analysis, and (3) a self-assessment and adjustment model. Through the plan, the college could rationalize information handling and build a prototype system to be translated into an automated configuration at a later time.

Moving to an automated information system by means of an intermediate step fosters a general understanding among faculty and staff, a condition of special significance in the small college. The alternatives developed by this study suggest several ways of generating knowledge of current practices and future needs at low cost among all those who are links in the information chain of a small institution.

***The Condition of Kentucky's Independent Colleges, 1971–72 to 1975–76: A Methodology and Some Results***
*Gerald H. Lunney, Council of Independent Kentucky Colleges and Universities*

Institutions, and state associations, often seek procedures which will permit a historic view of their performances, both individually and collectively, and which will further permit some

interinstitutional comparison of performance. Elegant and detailed procedures have been developed to accomplish these objectives, but they are often beyond the fiscal and technical reach of the small independent college. This paper describes a procedure which uses regularly gathered data and details the results of its application for the independent colleges in Kentucky.

The data for this study came primarily from HEGIS reports. Data on faculty and finances for 1971–72 and 1975–76 were gathered and analyzed. The study primarily covers an analysis of four income and four expenditure categories. All data were analyzed on a per-FTE basis in order to control for differences in institutional size. Ratios between the several income and expenditure categories were calculated and displayed in rank order so that any school could observe its relative position on each set of ratios.

This analysis permitted a review of overall income—expenditure trends and a more detailed review of certain components of increased expenditure.

## 17-F CONCURRENT CONTRIBUTED PAPER SESSION

*Donald M. Norris, Chairperson, University of Houston*

***The Institutional Impact of Statewide Program Review and Funding Manipulations***
*James R. Mingle, Southern Regional Education Board*

The concern for supply and demand imbalances for advance degree holders, especially those who have traditionally been employed as faculty, has led to a number of state-level responses. The actions taken or contemplated by state higher education coordinating agencies, governing boards, and legislatures provide the context for the discussion. Incentives and disincentives in budgeting and funding directed at stimulating institutional program change are briefly examined for their likelihood of use and potential impact. Responses include manipulation of formulas, differential tuition by program and level, funding "centers for excellence", incentive grants, and performance funding.

Given the constraints of institutional autonomy and the problems of centralized management, the ability of states and state agencies to influence program changes through funding is limited and can have unintended outcomes. The more likely responses are in the form of increased statewide program review of institutional programs, especially at the graduate level. The program review process, as it is being carried out in several states, is described along with the immediate outcomes of that process. To explore the wider impact, case studies examine institutions which have undergone statewide program review. Each case study examines the immediate outcomes of the review (termination, commendation, etc.) and the impact of that evaluation on personnel disposition, cost considerations, and internal reallocations. The impact of the review on morale and institutional climate and the role of the institution vis-a-vis other institutions is also examined. Unintended outcomes, both positive and negative, are also noted.

***A Longitudinal Study of Grades in 144 Undergraduate Courses***
*James E. Prather, Georgia State University*
*Glynton Smith, Georgia State University*
*Janet E. Kodras, Georgia State University*

This paper presents the findings of a grade study which should suggest hypotheses and modes of analysis for other institutions.

The study tested through regression analysis to determine if grade inflation was occurring in 144 individual undergraduate courses. The study sample was based upon the records of 9,338 current undergraduates and comprised over 125,000 grades. Grade inflation was defined as an increase in grades for the same course over a five-year period, while statistically controlling for the student's major field and academic and demographic background.

The primary findings were that the majority of courses—those in the middle range of grading—showed no systematic change in grade distribution over time. Grade inflation was found in only a minority of the courses studied. Those courses exhibiting the greatest degree of grade inflation were also generally the courses with the lowest grade, and even after

accounting for grade inflation, they remained conservative in grades. The infrequently mentioned phenomenon of grade deflation was shown to be present in those courses with the highest grade distributions. Different courses have differing final grade indicators, and student grades were strongly related to the major field the student was pursuing.

This study, therefore, suggests that the redistribution of grades that has occurred has resulted from the diversification of the curricula. More student options appear to have resulted in higher grade point averages because of a shift in course enrollments and majors away from traditional curricula.

***An Interinstitutional Analysis of Faculty Teaching Load***
*Stephen W. Ahrens, Iowa State Education Association*
*James W. Firnberg, Louisiana State University System*

Studies indicate that faculty salaries represent sixty to eighty percent of the operating budget of an institution of higher education and that teaching load accounts for two-thirds of the total faculty effort. This study concerns itself with a university's largest budgeted resource: faculty, and more specifically, faculty teaching load.

With the projected stability or decline in future enrollments and the growing concern for public accountability, the question of faculty teaching load and concomitant analysis becomes an increasingly more significant one.

This study was based on a two-year interinstitutional data exchange among fifteen cooperating universities and was an attempt to determine whether or not significant differences existed in teaching loads among selected universities as measured by student credit hours produced by full-time equivalent faculty. The study used a concept of limited comparability which took into account institutional differences in definitions, elements, and methods and adjusted for these differences by using basic data rather than derived or precalculated data. This concept was utilized as a practical approach to deriving relatively comparable data despite differences in institutional data.

Also included in the study was an interpretation of the results as to the reason that differentiation may or may not occur in faculty teaching loads. The statistical model incorporated into the study was a multivariate analysis of variance with fixed effects, and it utilized a factorial arrangement of treatments. Preplanned orthogonal contrasts were incorporated into the model.

Whereas this study produced empirical results which indicate some similarity among universities, perhaps its real contribution is in the overall methodology and interpretation of the results which easily lend themselves to modeling by other institutions contemplating interinstitutional analysis.

## 17-G CONCURRENT CONTRIBUTED PAPER SESSION

*William P. Fenstemacher, Chairperson, University of Massachusetts-Boston*

***Administrative Costs: What is Reasonable?***
*Shepard Braun, University of Cincinnati*

Colleges and universities at all levels are being asked by a variety of internal and external constituencies to provide not only an accounting but a justification of their stewardship of financial resources. With the advent of collective bargaining, faculties have begun to press for an explanation of the level of administrative expenditures; they are, in effect, asking for a cost benefit analysis of administrative services. The University of Cincinnati has, at the urging of various governance groups and the faculty bargaining agent, undertaken a major study of administrative expenditures. The purpose of this paper is to examine the analytical techniques used in this study and the formulation of a model for future administrative expenditures. A preliminary analysis indicated that administrative expenditures during the period from 1972 to 1976 increased over 74%, while instructional expenses increased by only 38%. For comparative purposes, the increase in the Higher Education Price Index during this same period was 30%.

The paper examines the trends in administrative expenditures at the university of Cincinnati compared with the overall growth in university expenditures. A model is proposed

in terms of the criteria for measuring administrative expenditures as a percentage of total university unrestricted funds expenditures. Our study of administrative costs was designed to address the following questions:

1. What programs constitute central administration?
2. What is the historical trend in adminstrative expenditures?
3. What are the key elements and factors contributing to the trend?
4. What real or perceived benefits have resulted from administrative cost increases?
5. What can be done to control administrative cost in the future?
6. What constitutes a reasonable level of administrative expenditures in relation to total university expenditures?

***Space Costing in Colleges and Universities***
*Sy Zachar, Educational Facilities Laboratories*

Should institutions of higher education cost account space and physical plant operating and maintenance expenses to their academic units or programs? And if so, should fiscal responsibility include managerial control of the physical environment by those units?

Colleges and universities have five basic resources: faculty, endowment or state appropriation, tuition, grants and contracts, and physical plant. Of these, the administration and faculty have paid the least attention to the physical plant, except in times of expansion. With few exceptions, the existing facilities or space on American campuses will have to house the institutions' needs since higher education no longer has, nor can it command, the capital necessary for new construction.

Plant operation currently consumes about 8% of an institution's budget (10–12% is not uncommon), of which half is expended on energy. The deferred maintenance of existing plant, a measure by which many institutions balanced their budgets or minimized their deficits, can no longer be postponed. Nationally, an estimated $22 billion to $35 billion worth of maintenance is now due. And, at the same time, the changing patterns of enrollment and curriculum in higher education make the allocation and use of space an increasing concern of the academic community.

It is believed that if individual academic departments or colleges were financially responsible for their physical environment the resources of the university's plant used in support of the academic mission would be more effectively utilized.

Space costing is a philosophical base for cost accounting space, operating, and maintenance expenses to the individual academic units of an institution. It gives the academic manager responsibility for determining the physical environment, including the amount of space, and within defined levels, the maintenance the space requires. It is a decentralization of the space resources allocation process.

***Budget Preparation and Inflation Prediction***
*Juan Garcia, University of Massachusetts*
*Meichun Hsu, University of Massachusetts*
*David L. Rumpf, University of Massachusetts*

A requirement for realistic budget projections in higher education is inflation predictors which are related to specific expenditure categories. Given the erratic inflationary behavior of the past seven years and the uniqueness of higher education expenditures, realistic inflation prediction requires a balanced combination of analytic forecasting and intuitive projection. Methodology developed for inflation prediction at the University of Massachusetts/Amherst prepares inflation predictors tailored to the needs of the university budget-planning process. Forecasts are based on an analysis of inflation trends over the past seven years and allow for subjective weighting of long-term, medium-term and short-term trends by a budget analyst. The data base used for analytic forecasting is a set of quarterly price indices selected from readily available sources. The price index data was chosen to correspond to specific expenditure categories which are applicable to higher education. Long-term, medium-range, and short-term inflation predictors are analytically developed. The budget analyst supplies subjective weighting to the three inflation predictors to obtain an overall inflation predictor for each expenditure category. The paper includes a description of the analytic methodology and a discussion of implementation in the budget-planning process.

## 17-H CONCURRENT CONTRIBUTED PAPER SESSION

*Joseph G. Rossmeier, Chairperson, Northern Virginia Community College*

***Some Weaknesses in Available Methods of Resource Accounting in Higher Education***
*David J. Zaumeyer, St. John's University, New York*
*Richard T. Wines, St. John's University, New York*

The research reported in this paper deals with available methods of resource accounting in higher education—past experiences, current applications, and future possibilities.

The problem of balancing needs and resources in higher education has been of interest to educators and administrators for decades, but no one solution has met with universal acceptance. Final resolution will undoubtedly require improved analytical capabilities in the planning and budgeting process in all of higher education. Decision-making tools such as cost simulation models, program budgeting techniques, and a wide range of other costing methods are available and conceivably might offer assistance. But, we are all aware that the literature describing these approaches is long on persuasion and rather short on critical appraisal.

The purpose of this paper is to provide institutional researchers with information on how these techniques may or may not be useful in decision making. The results of a survey of several major attempts to implement a variety of analytical techniques—successful as well as unsuccessful—are presented. The authors' basic concern was the identification of the major informational requirements of these different approaches and an assessment of their implementation potential. General criteria for successful implementation are identified and suggestions for future application presented.

***Zero-base Budgeting: A Context and a Case Study***
*Vernon A. Miller, University of Illinois-Chicago Circle*
*Shirley M. Buttrick, University of Illinois-Chicago Circle*

Recently, institutions of higher education have experienced increasing pressure towards program-oriented budget formats. This pressure for comprehensive budgeting, with more emphasis on the output side, usually comes from outside the institution. For many universities, however, resource reallocation increasingly provides the only realistic source for the funding of new programmatic directions. As institutions turn toward this source of funding, a larger number of faculty and staff become directly involved in the decision-making process, and the demand for more information and analysis is internally generated.

This paper looks at the context in which the internal budgeting process moves from an incremental toward a programmatic approach, emphasizing the factors necessary for this kind of budgeting system to work well. The programmatic approach is examined in the context of the decision-making process in an academic environment.

In September 1976, the University of Illinois at Chicago Circle undertook a revision of its internal budgeting process for fiscal year 1977–78. One of the four academic and administrative units which prepared zero-base budgets provides the case study for this paper. Zero-base budgeting is defined as an approach to comprehensive budgeting which must be adapted by the user to the context in which budgeting takes place. Problems and methods of treating zero-base concepts such as decision-packages, ranking, long-range planning, alternatives and consequences are summarized and weighed against the advantages of an incremental approach to budgeting.

***Development of an Inventory of Fiscal Competencies for Colorado Postsecondary Academic Administrators***
*Joseph J. Geiger, University of Colorado Board of Regents*

The decade of the 1970s has produced a period of flat or declining support for higher education. The competition for funds is increasing, and educational institutions are finding it increasingly difficult to cope with the problem of effective requests for, and expenditure of, appropriations. A major purpose of this study was to ascertain whether or not academic administrators perceive a need to upgrade their fiscal competencies in order to more

effectively participate in the budgetary process. Another purpose was to develop an inventory of fiscal competencies suitable for in-service training.

The population sampled included 319 Colorado postsecondary academic administrators. Data were arrayed and subjected to ANOVA techniques yielding perceived needs at three levels of administration, three sectors of institutions, and two sizes of institutions.

The findings indicate a widespread need for Colorado academic administrators to upgrade their fiscal competencies. Several significant perceived needs were displayed between administrative levels (department, division/dean, institutional); between types of institutions (2-year, 4-year, university), and between institutions of less than or greater than 5000 full-time students.

The findings appear to be sufficiently comprehensive and specific to provide the basis for developing a Colorado-unique set of in-service training materials. The Colorado response profile would also be applicable to any state with incremental, line-itemed budgeting and multiple governing boards.

## 17-I CONCURRENT CONTRIBUTED PAPER SESSION

*Larry H. Litten, Chairperson, Carleton College*

***Are Statewide Data Collection Systems Meeting the Local Institution's Needs?***
*Charles H. Bryson, Georgia State University*

About five years ago, the Georgia higher education board decided it was worthwhile to undertake the development of a comprehensive management reporting system which would strengthen its position with the legislature and enhance its ability to guide effectively public higher education in the state. Whereas each of the 33 institutions had reported its activities in its autonomous way, the management information system imposed some degree of consistency and structure to the wide variety of information flowing into the central governing board.

This paper describes a statewide data collection system and its impact upon the internal operation of one university as experienced by an institutional research staff. The paper postulates that many statewide data collection systems have an underlying concept that institutions should begin assembling data with the assumption that the availability of answers will somehow encourage the development of the potentially "right" questions. In this economy-conscious era, resources are limited and needs deserve more careful attention. The strengths, weaknesses, and possibilities of statewide data collection outlined in this paper are believed to be practical considerations deserving attention by policy and decision makers as well as policy and operations analysts.

***Assessing Community Impact—Some Conceptual Considerations and Field Experiences***
*Edward M. Cooper, Metropolitan State College*
*J. Frank Armijo, National Center for Higher Education Management Systems*
*Sidney S. Micek, National Center for Higher Education Management Systems*

Increased pressures on colleges from inflation, shifting enrollments, and intensified competition for public funds make it now more important than ever for colleges to assess their impacts on the communities they serve. By conducting an impact study, a college can evaluate its ability to meet the educational needs of the community, improve its program planning and resource allocation, and enhance its support within the community. The impacts a college produces can be economic (e.g., institutional expenditures, changes in income, standard of living, access, mobility, and security), educational (e.g., development of new skills and competencies), social (e.g., changes in family, recreational, or cultural activities) or technological (e.g, location of industry in the community because of the college). These impacts might affect the following types of communities: individuals or group clients (e.g., students, faculty, and staff); interest communities (e.g., businesses, governmental units, and other groups of people (e.g., groups defined according to age, income, or sex). Regardless of the groups selected for the study, assessment should be made of direct as well as indirect impacts.

Most impact studies so far have focused on economic factors, and though useful, descriptions of economic impacts constitute only a part of those needed by college administrators.

To facilitate the task of assessing community impact, a conceptual framework, guidelines for planning and managing the study, data collection methodologies, and way of tabulating and analyzing the data have been developed based on field testing conducted at three colleges. These are intended to be implemented successfully with a minimum of cost and staff time.

***Analyzing a Force for Change: Discrepancy between Aspiration and Achievement of Institutional Goals***
*S.V. Martorana, Pennsylvania State University*
*Eileen Kuhns, Catholic University of America*

This paper reports on the continuation of research presented in the authors' 1975 volume, *Managing Academic Change*, including (a) the use of magnitude estimation scaling for estimating the level of aspiration and achievement for specific institutional goals, (b) the relation of these levels to the progress of a particular change toward its institutionalization, and (c) a report on field applications in new college settings as well as on an update of some of the original case studies from the book as illustrative of hypotheses pertaining to institutional goals and their influence on institutional change. According to the authors' interactive forces theory of change developed in the 1975 volume, goal hiatus is one of three major categories of forces affecting change in an institution. Goal hiatus is the gap between the levels of aspiration and achievement of a given institutional goal. Hypothesized here is that a change related to a goal showing a relatively large hiatus is likely to become institutionalized, even though the goal in question is at only a middle-range level of aspiration in a rank ordering of all goals. Use of magnitude estimation scaling in these analyses shows promise of providing practical assistance to administrators and other decision makers who are responsible for planning and monitoring change undertaken to carry out an institution's goals.

## Time Period 18 Wednesday 3:45–5:15 p.m.
## Concurrent Sessions

## 18-A EVALUATING THE COMPOSITE QUALITY OF DEPARTMENTAL FACULTY

*Bert R. Biles, Chairperson, National Center for Higher Education Management Systems*
*Leonard C. Romney, National Center for Higher Education Management Systems*
*Robert Gray, National Center for Higher Education Management Systems*
*Barry Munitz, University of Houston*

This session considers the concept of composite departmental quality as the "sum of the parts" from the perspective of the collective efforts of different individuals performing a variety of tasks.

The question, How well are we doing? is addressed by looking at strategies for assessing the effectiveness of accomplishing specific tasks (teaching, for example, or serving as departmental chairperson).

Next, the question, In what direction are we going? is looked at by exploring the issue of institutional and departmental goal congruence, with the assumption that a high degree of congruence between departmental and institutional goals is desirable.

The next portion of the session focuses on a new strategy—a state-of-the-art techique—for analyzing various indices of departmental effectiveness in response to the question, How can we analyze all of this data in a meaningful way?

The conclusion addresses the question, So what does all this mean? by discussing the implications for using departmental quality assessment and ways that it can have a meaningful impact in university decision making.

## 18-B INDEPENDENT COLLEGES: THE IMPACT OF STATE DATA COLLECTION ACTIVITY UPON INDEPENDENT COLLEGES AND UNIVERSITIES

*Virginia Fadil, Chairperson, National Association of Independent Colleges and Universities*
*James Olliver, North Carolina Association of Independent Colleges and Universities*
*Eric Watters, Council of Independent Kentucky Colleges and Universities*
*Gerald H. Lunney, Council of Independent Kentucky Colleges and Universities*
*Morgan Odell, Association of Independent California Colleges and Universities*
*Marilyn McCoy, National Center for Higher Education Management Systems*

## 18-C ALAPI (LATIN AMERICAN ASSOCIATION FOR INSTITUTIONAL RESEARCH)

*Zuhair Warwar, Chairperson, Universidade Estadual de Campinas (UNICAMP), Brazil*
*Eladio de Almeida Barbosa, Universidade Federal do Rio Grande do Norte*
*Jose Camilo dos Santos Filho, Universidade Estadual de Campinas*
*Maria Lucia Rocha Duarte de Carvalho, Universidade Estadual de Campinas*
*Alfonso Trujillo Ferrari, Universidade Estadual de Campinas*
*Maria Regina Borges B. de Carvalho, Universidade do Maranhao*

The papers to be presented by the Latin American Group will address the following subjects:

1. Some of the revealing results of the objective application based on the implications of the first seminar on institutional research
2. An analysis of the perplexing problems of the modern university
3. The analysis of the Brazilian experience related to the place of short-cycle institutions within the system of higher education, proposing an alternative model for experimentation in Brazil
4. The development of a proposal of institutional research methodology adapted to a Brazilian university
5. The contribution for delimiting the guidelines of the university research policy, identifying the innovations elapsing from the reform, their contribution, and the level of compromise between the university and the state development policy regarding the education and the culture.

## 18-D THE COSTS AND BENEFITS OF INFORMATION

*Gerald W. Mclaughlin, Chairperson, Virginia Polytechnic Institute and State University*
*Edith H. Carter, New River Community College*
*Denis J. Curry, Washington Council for Postsecondary Education*
*Mary A. Golladay, National Center for Education Statistics*
*Hans H. Jenny, College of Wooster*

In the past, we have focused on how to collect data more rapidly and more accurately. We have sought to answer questions on the effectiveness and, especially, the efficiency of postsecondary

education, often using prepackaged software because of time and money limitations. This session presents an opportunity to pause and reflect on the overall status of data flow.

The impact of data collection, storage, and transmittal is discussed. This includes, where available, information on the costs of data in terms of machine requirements, software, and people involved.

On the "benefit of data" side, participants discuss relative value of types of data and amount of detail required. A major component of the discussion on the benefit of data focuses on the changes needed in the area and the question, Are we becoming providers of pertinent information or conveyors of historical data?

## 18-E MARKET RESEARCH AS AN INSTITUTIONAL RESOURCE IN HIGHER EDUCATION: WHO NEEDS IT . . . AND FOR WHAT?

*Larry H. Litten, Chairperson, Carleton College*
*Ira Dolich, University of Nebraska-Lincoln*
*Joseph E. Gilmour, Washington Council of State College and University Presidents*
*Helen Stecklein, Metropolitan Community College, Minnesota*
*Randall G. Chapman, Queen's University, Ontario*

Marketing and market research techniques have recently begun to capture considerable attention in higher education. A variety of external and internal factors, not the least of which are the current demographic projections, has led to an appropriation of these techniques to a variety of applications in higher education. This session seeks to present a sampler of these techniques and applications. There is both discussion of a variety of problems which can be addressed by market research and demonstration of some particular analytic techniques which can be employed. Following a general overview paper on the relevance of market research to higher education, representatives of various types of institutions briefly present a particular application (research purpose or technique, or both). The oral presentations are necessarily brief but are developed more fully in supporting papers and in the discussion which follows the presentation.

## 18-F DEFINING AND USING GOALS IN INSTITUTIONAL RESEARCH

*Robert H. Fenske Chairperson, Arizona State University*
*Cameron L. Fincher, University of Georgia*
*Richard E. Peterson, Educational Testing Service*
*Richard R. Perry, University of Toledo*
*Leonard C. Romney, National Center for Higher Education Management Systems*
*Norman P. Uhl, North Carolina Central University*

The overall theme of this seminar is related to the persistent difficulties in program evaluation and measurement of outcomes in higher education. While it should seem axiomatic that all institutional research efforts begin with consideration of the goals of the institution, this prerequisite seems honored more in the breach than the observance. Much of the research activity engages in aimless data gathering that cannot measure change or progress except in institutionally irrelevant terms, e.g., faculty productivity or resource utilization compared with a previous year or another academic unit or institution. The most appropriate comparison is the extent of progress or contribution toward the institution's goals. Part of the present difficulty in using goals in institutional research is in their formulation into usable (behavioral) modes. This seminar deals with the basic logic of research design, instrumentation, and applications of goals-oriented institutional research.

## 18-G RATE OF RETURN AND BENEFIT-COST ANALYSES IN HIGHER EDUCATION

*David R. Witmer, Chairperson, University of Wisconsin-LaCrosse*
*Patricia D. Burdett, University of Wisconsin-Madison*
*John D. Chapin, University of Wisconsin-Madision*
*Franklin L. Duff, University of Illinois-Champaign*
*Charles N. Dold, University of Illinois-Champaign*
*David H. Clark, University of Maine-Orono*

This seminar features eight papers describing rate of return and benefit-cost analyses of the U.S. Teacher Corps, alternate schooling, academic programs, institutional effectiveness, and the higher education instruction of men and women in the U.S. in 1961–1975.

No formal presentations are planned. Participation in the discussion is controlled on the basis of the following priorities: (1) the authors, (2) persons who have read the background material, (3) observers.

Discussion focuses on the results and the methods of current research concerning investments in the special field of higher education, within the wider field of human capital production, within the general field of capital accumulation and investment, which is based on the evidenced willingness (indeed propensity) of people to forego the immediate joys and utilities of current consumption in favor of the expected greater joys and utilities of future consumption.

## Thursday, May 25

## Time Period 19 8:30–9:30 a.m.
## Special Interest Groups

## 19-A THE AMERICAN COUNCIL ON EDUCATION'S PROGRAM ON NONCOLLEGIATE SPONSORED INSTRUCTION

*John J. Sullivan, Chairperson, American Council on Education*
*Sinclaire M. Scala, General Electric Company*
*Gerry Woods, Pennsylvania Department of Education*

The Program on Noncollegiate Sponsored Activity is a national activity of the American Council on Education (ACE). It provides academic institutions with information on which to base credit awards to people who successfully complete courses taken outside of colleges and universities. The program evaluates and makes credit recommendations for formal courses offered by noncollegiate organizations which are not engaged primarily in education but which offer courses to their employees or members. Descriptions of the courses, with the credit recommendations, are published in *The National Guide to Credit Recommendations for Noncollegiate Courses*. Begun in 1974, the program now has 70 participating noncollegiate organizations such as the Bank of America, the Communications Workers of America, the Federal Aviation Agency, the General Electric Company, and the Y.W.C.A. Educational organizations in six states participate with ACE in administering the program: the Consortium of the California State University and Colleges, the Massachusetts Board of Higher Education, the Michigan Department of Education, the North Carolina Joint Committee on College Transfer Students, the Pennsylvania Department of Education, and the Tennessee Higher Education Commission. This panel session discusses the program and its implications from the perspective of ACE, a participating state educational agency, and a participating noncollegiate organization.

## 19-B RESOURCE MANAGEMENT AT THE COMMUNITY COLLEGE: NATIONAL COUNCIL FOR RESEARCH AND PLANNING

*Fred A. Snyder, Chairperson, Amarillo College*
*Toni M. Hall, Texas Education Agency*
*Elmo D. Roesler, Virginia Community College System*
*R. Eugene Byrd, Amarillo College*
*Angelo C. Gilli, Texas Southern University*

This session includes three papers on resource management at the community college by experienced community college educators as well as an appraisal of these papers by a university professor of higher education.

A paper on program planning and employment demand summarizes a project in Texas which relates statewide job availability for career graduates from two-year colleges to the supply of graduates. Practical considerations of coordination, funding, data collection, developing the supply/demand model, and disseminating results are discussed.

Determining facility use and needs is no easy task even under stable conditions. During periods of rapid change in program enrollments, the problem is even more challenging. A second paper discusses the space planning experiences of Virginia Community Colleges.

Most educational managers agree that an in-service staff development program is necessary to cope with changing two-year college programs. The third paper describes the program of in-service development at Amarillo College, Texas.

Finally, a professor of higher education and former community college administrator responds to the question, How well do these presentations relate to the needs of resource management of the two-year college?

## 19-C URBAN INSTITUTIONS: EXPLORING ECONOMIC IMPACT STUDIES

*Marilyn K. Brown, Chairperson, University of Pittsburgh*
*Diane H. Palmer, University of Pittsburgh*
*Loring M. Thompson, Northeastern University*
*C. Dudley Salley, Georgia State University*
*Laura E. Saunders, University of Washington*

Economic impact studies have proven to be a powerful tool in convincing the urban community of the economic contributions made by the university. This session explores the basic elements of an economic impact study and suggests methods for adapting the ACE (American Council on Education) model. One of the shortcomings of the ACE model is the use of questionnaires to determine spending patterns. This session discusses alternative methods of collecting such data. The investment in an economic impact study will be wasted unless the results are highly publicized and obtain institutional and community acceptance. The experiences of several institutions in Boston, which contributed to a combined study, and those of Georgia State University, which obtained maximum exposure for its study, are reported. Finally, the methodology and results of a different type of economic impact study are discussed—the study by the University of Washington which assessed the impact of federal funds on the state's economy.

## 19-D BALANCING NEEDS AND RESOURCES IN AUSTRALIA: AN ALTERNATIVE APPROACH TO RESOURCE ALLOCATION

*John I. Anderson, Chairperson, Royal Melbourne Institute of Technology*

## Time Period 20 Thursday 9:30–10:45 a.m.
## General Session

### 20-A ROUNDTABLE—BALANCING NEEDS AND RESOURCES: A STATE PERSPECTIVE

*Bert R. Biles, Moderator, National Center for Higher Education Management Systems*
*Granville M. Sawyer, President, Texas Southern University*
*W.E. Snelson, State Senator, State of Texas*
*Theodore Nicksick, Jr., President, Wharton County Junior College*
*Kenneth Ashworth, Commissioner, Coordinating Board, Texas College and University System*

This roundtable forum reflected upon the main theme for the 1978 AIR Forum as it addressed the question of Balancing Needs and Resources. This theme represents many issues and challenges for higher education as it prepares for the 1980s, and many of these issues focus on the relationships between institutions, different sectors of higher education, and the executive and legislative branches of state government.

For example, who should supply the resources: students or state or local government? How should these resources be delivered: through student aid, subsidies to private colleges, cost- or enrollment-based formulas?

How can higher education maintain vitality and responsiveness in the face of stabilizing or declining enrollments and resources? What are the priorities and needs that higher education should prepare to address in the 1980s?

These and other issues were explored in this roundtable discussion involving a university president, an influential state senator, a president of a junior college, and the commissioner of the coordinating board of a state system.

## Time Period 21 Thursday 10:45 a.m.–12:15 p.m.
## Concurrent Sessions

### 21-A QUANTITATIVE METHODS IN INSTITUTIONAL RESEARCH: A CASE FOR HEURISTICS

*Stefan D. Bloomfield, Chairperson, Oregon State University*
*Nathan Dickmeyer, Stanford University*

This seminar session, sponsored by the Educational Sciences Section of ORSA, focuses on the often overlooked role of heuristic procedures in quantitative models for institutional research. Two recent applications of operations research methodology to institutional research problems are described, both of which resorted to heuristic procedures to avoid the substantial technical difficulties that would have accompanied the development of optimization-based approaches. The development of Stanford University's financial planning model, called TRADES, was made feasible through the inclusion of heuristics to model shifting preferences and to describe the complexities of the feasible region and the value dependence among variables—none of which could be adequately modeled with conventional analytic methods. The design of a classroom scheduling model at Oregon State University incorporated heuristics not only to avoid extremely complex and expensive optimization techniques but also to encourage the ultimate acceptance and use of the model by university personnel.

## 21-B NCES/EMS SUBJECT MATTER CLASSIFICATION PROJECT

*James R. Sherman, Cochairperson, Educational Management Services*
*John F. Zimmer, Cochairperson, Educational Management Services*

Educational Management Services, Inc. (EMS), of Minneapolis, recently completed a two-year contract with the National Center for Education Statistics for the development of a Classification of Educational Subject Matter. It is not a classification of instructional programs, nor should it be used as such. It is a subjective array of knowledge that is presently known to exist in American education from pre-elementary through postdoctoral studies. The hierarchical classification will be used by schools, colleges, and universities to identify and code instructional activities for local, state, and federal reporting purposes. The individual entries are well defined and are aggregated into twenty-two major subject-matter categories. Over three-hundred people provided input to EMS in the development of the document which will be available in the summer of 1978.

## 21-C HIGHER EDUCATION DATA BASES

*Michael Young, Cochairperson, The Ohio State University*
*Paul F. Mertins, Cochairperson, National Center for Education Statistics*
*Curtis O. Baker, National Center for Education Statistics*

This session discusses the Ohio State University's efforts in development of a planning data base. The components of the data base are described along with projected resources and costs. The focus is on policy issues and their relationship to data base design.

The 1977 reorganization of the National Center for Education Statistics (NCES) created a separate branch to focus on systems design and analysis. NCES has also placed a special emphasis on dissemination of products other than printed reports. This paper discusses how these changes will affect surveys in postsecondary education and the availability of the resulting data.

Discussion of NCES reorganization places particular emphasis on the Postsecondary and Vocational Education Statistics Division; presentation of the NCES proposed five-year plan for institutional data collection and efforts to plan necessary student and faculty characteristics data; and update of the current survey processing status, preliminary release, final publication and tape availability.

## 21-D PRODUCTIVITY—A BEHAVIORAL PERSPECTIVE

*Wayne R. Kirschling, Chairperson, National Center for Higher Education Management Systems*
*Richard M. Fenker, Texas Christian University*
*Leonard C. Romney, National Center for Higher Education Management Systems*

The most commonly-referred-to conceptual model of productivity is based on relationships between inputs (factors of production), processes (production technologies), and outputs (goods and services). This model, however, is not the only possible conceptual basis for productivity. Moreover, this model has been criticized as being too mechanical to be directly applicable to higher education. The distinction is sometimes made between mechanical models of productivity (e.g., the input-process-output model) and behavioral models.

This session highlights three behavioral models. The first model, used at Texas Christian University, focuses on the actual, perceived, and ideal relationships between faculty behaviors and incentives. The second model examines the relationships between faculty productivity/job satisfaction and four factors: task, organization, environment, and individual. The final model looks at faculty productivity from a "game" perspective. Particular attention is paid to the game structure which surrounds student-faculty interactions.

## 21-E THE INTERFACE OF PLANNING, BUDGETING, AND INFORMATION SYSTEMS WITH ACADEMIC PROGRAM REVIEW AT THE STATE LEVEL

*Robert J. Barak, Chairperson, Iowa State Board of Regents*
*Gordon K. Davies, Council of Higher Education for Virginia*
*Robert E. Carter, Kentucky Council on Public Higher Education*
*Denis J. Curry, Washington Council for Postsecondary Education*

There has been a broadening and expansion of the academic program review responsibilities of state postsecondary education coordinating/governing agencies in recent years. In some cases, these responsibilities have developed independent of other agencies' functions, particularly master planning and budgeting. This session centers on the need for integrating the state agencies' functions of planning, budgeting, data collection, and program review. This is accomplished by the presentation of a brief overview of the problem and three papers, each addressing various aspects of the issues with a view towards and integration of these functions.

## 21-F INFORMATION SYSTEMS CONCEPTS AND TECHNOLOGY TO SUPPORT PLANNING AND INSTITUTIONAL RESEARCH

*Charles R. Thomas, Chairperson, CAUSE*
*Richard L. Mann, University of Kansas*
*Louis R. Leurig, University of New Mexico*
*John W. Gwynn, University of Wyoming*

## 21-G RESOURCE MANAGEMENT IN CARTTER'S EIGHTIES: ALTERNATIVES TO THE ENROLLMENT-DRIVEN MODEL

*Dwight C. Smith, Jr., Chairperson, State University of New York at Albany*
*Ernest Scatton, State University of New York at Albany*
*Wendell G. Lorang, Jr., State University of New York at Albany*
*George Beatty, Jr., University of Massachusetts*
*David L. Rumpf, University of Massachusetts*

In 1973, Allan Cartter warned AIR that serious problems would arise in the 1980s as postsecondary enrollments experienced a significant decline. Other than sharpening our collective sense of apprehension, little has been done to prepare for that time. A particular problem of enrollment decline is the effect it will have on institutional budgets that rely upon enrollment-driven formulas. While it may be politically impossible to abandon them, institutions now dependent upon such formulas need other tools that can support the amelioration of their most drastic effects and improve internal management of the resources that are provided. This seminar provides a "work-in-progress" discussion of the studies two state institutions are conducting to develop funding and allocation formulas that give more weight to curriculum considerations in the generation and use of instructional resources and less weight to undifferentiated body counts.

# Sidney Suslow Outstanding Forum Paper Award

In early May of 1977, Sidney Suslow, one of the founders of the Association for Institutional Research passed away. This gentle, inspiring human being had not only served as president of the Association, he had also continuously dedicated himself to the improvement of institutional research as a profession.

Nowhere in the tireless efforts of Sidney Suslow was his dedication, encouragement, and high standard of excellence for the profession better exemplified than in his contributions to the establishment of extensive and quality publications sponsored by the Association. He served as chairperson of the Publications Board and, until his death, served as editor of the quarterly monograph, *New Directions for Institutional Research*.

It was in recognition of this special member of the Association, and to perpetuate his concern for excellence in the profession and its publications, that the Publications Board recommended, and the Executive Committee approved, the establishment of the Sidney Suslow Outstanding Forum Paper Award. This award is to be presented annually to the individual presenting the Forum paper (from the previous year's Forum) judged to be of the highest quality with regard to the application of research methodology and analysis as well as the contribution of the topic to the development of the field of institutional research.

The first Sidney Suslow Outstanding Forum Paper Award was presented at this 1978 Houston Forum for the outstanding paper presented at the 1977 Forum in Montreal. This paper was printed in its entirety in *Research and Planning for Higher Education*, proceedings of the 1977 AIR Forum in Montreal.

**SIDNEY SUSLOW OUTSTANDING FORUM PAPER AWARD RECIPIENT**

1977 Forum: Charles Dudley Salley, Georgia State University
*Calculating the Economic Multipliers for Local University Spending*

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# Minutes of the Annual Business Meeting

**Minutes**
**ANNUAL BUSINESS MEETING**

**Hyatt Regency Houston, Houston, Texas**
**May 23, 1978**

The following appendixes are attached to these minutes:

A. Certification of Election, 1978
B. Report of the Secretary
C. Membership Count
D. Report of the Executive Secretary
E. Treasurer's Report
F. 1978–79 Budget Proposal
G. Report of the Policy Analysis Committee
H. Report of the Long-Range Planning Committee
I. Report of the Professional Development and Services Committee
J. Report of the Community College Affairs Committee
K. Report of the Publications Board
L. Resolution from the Consortium for Institutional Research re ERA

Special note: This meeting was recorded. The tapes are on file in the Executive Office.

The meeting was called to order by the president, Warren W. Gulko, at 3:50 p.m.

I. **Minutes.** It was moved and seconded that the minutes of the 1977 Annual Business Meeting be approved as printed and distributed. The motion carried.

II. **Procedures for the meeting.** The president outlined procedures for the meeting, asking that persons wishing to speak use one of two floor microphones and that they identify themselves. He asked also that persons speaking to the ERA question that was to come before the meeting under new business observe a two-minute limit.

III. **President.** (Warren W. Gulko)
Gulko stated that his Presidential Address, delivered at the general session on Monday, May 22, constituted his report. However, in order to clarify some misunderstanding about it, he emphasized that the proposals presented in the address were his own. It is his intention to present his recommendations formally to the Executive Committee after July 1, when he is no longer president. The Executive Committee will follow whatever process it considers appropriate in addressing them. Any specific proposals that come from this executive process and which involve constitutional change will be presented to the membership for vote. The summer issue of the AIR Newsletter will include an article by Gulko which will outline and discuss his proposals and solicit the response and ideas of the members.

IV. **Past President/Nominating Committee/Election Committee** (James W. Firnberg)
A. Nominating Committee. Firnberg urged participation by all members in the 1978–79 nominating process. The Call for Nominations will be sent in late August or early September.
B. Election Committee. (See Appendix A.) The Election Committee members were Firnberg, chairperson, Joanne C. Ferriott, and J. Stephen Welsh. Firnberg re-


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ported that of 1468 eligible voters nearly one-half (716) returned ballots by the deadline. The following persons were elected, terms to commence July 1, 1978:

| | |
|---|---|
| Vice President | F. Craig Johnson |
| Secretary | W. Sam Adams |
| Executive Committee Member-at-Large | Molly C. Broad |
| Executive Committee Member-at-Large | Gerald W. McLaughlin |
| Nominating Committee Member | Martha Vlahos |
| Nominating Committee Member | Barbara D. Holmes |
| Nominating Committee Member | Paul Jedamus |
| Nominating Committee Member | William P. Fenstemacher |
| Nominating Committee Member | Daniel R. Coleman |

V. **Vice President/Program Committee.** (Robert A. Wallhaus)
Since the Forum itself constitutes the vice president's report, Wallhaus announced only that registration for Forum '78 stood at that moment at about 725.

VI. **Secretary/Membership Committee.** (William L. Tetlow)

A. Distinguished Membership award. Tetlow announced that Paul Dressel had been awarded distinguished membership by the Executive Committee on recommendation of the Membership Committee. The action was taken in January 1978.

B. Written report. Tetlow presented a written report to the meeting which outlined the highlights of his three years in office. He called special attention to the preliminary findings resulting from the membership survey. The report was received. (See Appendix B.)

C. Membership count. Tetlow noted that the final membership count for 1977 was 1354 and that the current count as the 1978 Forum began was 1335. (See Appendix C.)

VII. **Site Selection Committee.** (William L. Tetlow)

A. 1979. The 1979 Forum will be in San Diego, California, May 13–17, at the Town and Country Hotel. Werner Lendenmann is local arrangements chairperson.

B. 1980. The 1980 Forum will be in Atlanta, Georgia, at the Peachtree Plaza Hotel. Joe Ezell is local arrangements chairperson.

C. Procedures. Tetlow outlined procedures and time frame for selection of Forum sites: an attempt is made to schedule Forum sites 4–5 years in advance; to book into a single hotel of 800–1100 rooms; to rotate sites geographically. Following selection of a region, identification of possible hotel(s) and local support, a recommendation is made by the Site Selection Committee to the Executive Committee which must formally ratify the recommendation.

D. Receipt. The report was received.

VIII. **Executive Secretary.** (Jean C. Chulak)
Chulak presented a written report to the meeting. Specific mention was made of the move during the year to larger quarters and the increased responsibilities of the executive office relating to the Forum and to regional workshops. (See Appendix D.) The report was received.

IX. **Treasurer.** (William F. Lasher)

A. Financial report. Lasher presented a report showing the cash position of the Association on June 30, 1977. He noted its continued healthy position. (See Appendix E.) The report was received.

B. Budget. Lasher presented, on behalf of the Executive Committee, the proposed budget for 1978–79, outlining income and expenditures each of $106,800. Lasher moved that the budget be approved as presented and that variations in the budget by the Executive Committee must be within the limits of expected revenue. The motion was seconded and carried. (See Appendix F.)

X. **Policy Analysis Committee.** (Edith H. Carter)
Carter briefly reviewed the history and charge of the committee and outlined major areas of activity and concern during 1977–78. She recommended that the Association begin to define goals and objectives, determine a direction, and begin to establish machinery for influencing governmental regulation. Her written report was received. (See Appendix G.)

XI. **Long-Range Planning Committee.** (Frank S. Black)
Black reported briefly on the long-range planning questionnaire sent to the membership in November. The report was received. (See Appendix H.)

XII. **Professional Development and Services Committee.** (Jack E. Rossmann)
Rossmann reported on the activities of his two subcommittees: International Activities and Professional Development. The reports were received. (See Appendix I.)

XIII. **Community College Affairs Committee (Ad hoc).** (Edith H. Carter)
Carter reviewed the charge and activities as well as future direction of this ad hoc committee which was established in 1977–78 by the Executive Committee. The written report was received. (See Appendix J.)

XIV **Publications Board.** (Marvin W. Peterson)
Peterson presented a written report reviewing the status of both new and old publications efforts and related editorial responsibilities. The report was received. (See Appendix K.)

XV. **1979 Local Arrangements Committee.** (Werner Lendenmann)
On behalf of the 1979 Forum Local Arrangements Committee, Lendenmann outlined the many attractions of San Diego and invited the attendance of all.

XVI. **Old Business.**
There was no old business.

XVII. **New Business.**
On behalf of the Executive Committee, Gulko presented the following recommendation to the meeting:

> The Executive Committee recommends to the Annual Meeting that the Association for Institutional Research not hold its annual Forum in the United States in a state that has not ratified the Equal Rights Amendment.

Tetlow was asked by the president to speak to the purely technical implications for the Association if the site of the 1980 Forum were to be changed at this time. He divided the technical implications into two subclassifications—logistical and legal—and briefly spoke to each point. Regarding the logistical implications, he noted that there were fewer than two years in which to (a) find a new site with suitable hotel space and open dates and (b) form a new Local Arrangements Committee. He next outlined the nature of the agreement with the Peachtree Plaza Hotel in Atlanta but offered no opinion on the probability of a lawsuit or its outcome if the Association were to attempt to negate its "contract."

The president called for discussion. The following persons spoke to the issue: Glynton Smith, Alfred L. Cooke (See Appendix L.), Douglas J. Wright, Thomas R. Mason, Mel Lasell, and Robert I. Lewis II.

E. Michael Staman moved to amend the recommendation to make it effective July 1, 1980. The motion was seconded. There was discussion. Gloria Scott moved the previous question. The motion was seconded and carried, and a vote on the amendment was taken. The amendment was defeated.

Discussion of the primary motion continued. The following persons spoke to the issue: Chuck Brown, Craig Johnson, Oscar Lenning, Gloria Scott, Rick Heydinger, Ris Westen, John Stecklein, Joan Tonn, S. Godwin Wong, Peggy Heim.



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Werner Lendenmann moved to table the original recommendation. The motion was seconded. The motion was defeated.

Charles Bryson moved the previous question. The motion was seconded and carried, and a vote on the original recommendation was taken. The recommendation was rejected by a vote of 66 aye, 158 nay.

Gerald Lunney moved that the Annual Meeting go on record as definitely holding the 1980 Forum in Atlanta. The motion was seconded and carried.

Alfred Cooke moved that the Association go on record as follows: The Association for Institutional Research affirms its belief that sex discrimination is no less an abomination than is discrimination because of age, race or national origin. To recognize in any form the right of others to so discriminate is to in some way be guilty of the act ourselves. The motion was seconded and carried.

The meeting adjourned at 5:35 p.m.

## Appendix A
## CERTIFICATION OF ELECTION

(Note: The actual certification is not being reproduced in these *Proceedings*. It is on file in the Executive Office. See Minutes, Section IVB, for election results.)

## Appendix B
## ANNUAL REPORT OF THE SECRETARY
### William L. Tetlow

*Introduction*. At this end of my three-year term of office, it seems appropriate to report on activities and events for the entire period July 1975–June 1978.

With the creation of the central office in Tallahassee and the subsequent hiring of a full-time executive secretary, the nature and functions of the elected office of secretary underwent a transformation. Many of the necessary but time-consuming tasks—such as maintenance of the mailing list, etc.—performed by my predecessor, Jim Morishima, were transferred to Tallahassee. Consequently, the time and effort of the secretary was then focused into policy development and leadership activities on behalf of the entire Association.

*Membership Drive*. My first effort was directed towards expanding the membership to provide a sound financial base for expansion of professional programs and services. Membership for 1975 as at 12/31/75 was 1153. Consequently, the Membership Committee developed a three-year membership drive program which commenced in February 1976. Phase IA focused on attracting new membership from California since the 1976 Forum was to be held in Los Angeles. Ninety-six of the 587 Forum registrants were Californians, and many of them retained membership in the Association (70 in 1977), so the first effort was successful.

Phase IB, a concentrated personal letter-writing campaign, yielded gratifying results. For example, membership in British Columbia has increased from 11 to 20 over the last two years and the Canadian total increased from 92 to 162. Similar results occurred in other regions. Phase IC was a concerted effort to get all non-member Forum presentors to join AIR and has been equally successful. Phase II involved cross-matching of membership lists with those of other national organizations and a letter of invitation issued to prospective members. A recent effort was aimed at members of the post-secondary education section of AERA. In addition, Jean Chulak has done an outstanding job in membership recruiting from her Tallahassee office.

The overall result has been gratifying with a 17% increase in membership in two years and an estimated 26% increase in three years.

| Membership as at 31 December | | | |
|---|---|---|---|
| 1975 | 1976 | 1977 | 1978 |
| 1153 | 1213 | 1354 | 1450 est. |

*Distinguished and emeritus membership*. During the last three years, the Membership Committee has developed guidelines for both of these new membership categories and has worked actively to screen nominations and recommend individuals to the Executive Committee. The result has been the addition of John Stecklein (1977) and Paul Dressel (1978) to the select list of AIR Distinguished Members.

*Meritorious service award*. In its deliberations regarding distinguished membership nominees, the committee concluded that a new award was required to grant recognition to individuals who have made significant contributions to AIR through unselfish service over many years. Guidelines for such an award are being developed for submission to the Executive Committee in July 1978.

*Member survey*. The Executive Committee approved a plan for a 1978 survey of members to compare with similar data collected in 1966 and 1970. In December 1977, a questionnaire was sent to approximately 1400 members of AIR. Seven hundred twenty (720) returns, a return rate of over 50%, have been received. The data have been partially analyzed and preliminary results sent to the Executive Committee. The complete results are scheduled for publication in the Fall of 1978. Three tables are appended to this report to provide you with some early results. Comparisons have been made with the 1966 and 1970 surveys.

In summary, the results show:

1. The Association has attracted significantly larger numbers of young institutional researchers; over half of the 1978 membership is under age 40.

2. Over one-third of the 1978 membership is employed by institutions enrolling more than 15,000 students compared with one-fifth in 1966.

3. Information Systems and Faculty and Staff Studies have risen to the top half of the priority list for research topics.

*Conclusion*. In reflecting upon the achievements of the last three years, I find that many things of value to the membership have been accomplished. These achievements are the result of the cheerful and dedicated service of many IR professionals. The members of the Membership Committee are documented in earlier reports and the *Directory*, so I won't list them again here. However, a very special word of thanks is due to Jim Montgomery, Frank Duff, Jean Chulak, and Craig Greenhill who all gave extensive service and assistance.

Thank you for the opportunity to serve you all.

**Table 1**
**AIR 1978 Membership Survey:**
**Percentage Distribution of Age for**
**AIR Members, 1966 to 1978**

| | Percent | | | Cumulative Percent | | |
|---|---|---|---|---|---|---|
| Age bracket | 1966 (n=382) | 1970 (n=669) | 1978 (n=720) | 1966 (n=382) | 1970 (n=669) | 1978 (n=720) |
| Unspecified | 2 | 1 | 1.5 | 100 | 100 | 100.0 |
| Over 65 | 2 | 2 | .3 | 98 | 99 | 90.5 |
| 61–65 | 3 | 3 | 2.2 | 96 | 97 | 98.2 |
| 56–60 | 5 | 6 | 5.6 | 93 | 94 | 96.0 |
| 51–55 | 10 | 8 | 9.4 | 88 | 88 | 90.4 |
| 46–50 | 11 | 14 | 12.6 | 78 | 80 | 81.0 |
| 41–45 | 19 | 18 | 14.0 | 67 | 66 | 68.4 |
| 36–40 | 21 | 18 | 19.2 | 48 | 48 | 54.4 |
| 31–35 | 16 | 18 | 20.8 | 27 | 30 | 35.2 |
| 26–30 | 10 | 10 | 12.4 | 11 | 12 | 14.4 |
| 20–25 | .3 | 2 | 2.0 | .3 | 2 | 2.0 |

Median Age: 1966—40.7 years; 1970—41.5 years; 1978—39.9 years

**Table 2**
**AIR 1978 Membership Survey:**
**Size of Institutions In Which AIR Members Are Employed**
**and Percentage Distribution**

| Institution size (head count, day enrolment) | 1966 percent (n=329) | 1970 percent (n=563) | 1978 percent (n=657) | 1966 cumulative percent (n=329) | 1970 cumulative percent (n=563) | 1978 cumulative percent (n=657) |
|---|---|---|---|---|---|---|
| Greater than 30,000 | 10.9 | 13.7 | 15.9 | 11 | 14 | 16 |
| 20,001-30,000 | 7.0 | 7.6 | 13.2 | 18 | 21 | 29 |
| 15,001–20,000 | 3.6 | 8.9 | 7.2 | 22 | 30 | 36 |
| 10,001–15,000 | 14.0 | 10.7 | 12.2 | 36 | 41 | 48 |
| 5,001–10,000 | 16.4 | 22.9 | 18.5 | 52 | 64 | 67 |
| 2,001–5,000 | 22.2 | 15.6 | 16.4 | 74 | 79 | 83 |
| 1,000–2,000 | 6.7 | 10.3 | 9.8 | 81 | 90 | 93 |
| Less than 1,000 | 7.9 | 7.3 | 6.3 | 89 | 97 | 99 |
| No data | 11.3 | 3.0 | 1.2 | 100 | 100 | 100 |
| Totals | 100.0 | 100.0 | 100.0 | 100 | 100 | 100 |



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**Table 3**
**AIR 1978 Membership Survey:**
**Research Priorities in IR Offices**

Rank ordering of emphasis in current research, 1959 to 1978
(all agencies and institutions):

| Area of IR Emphasis | 1978 rank | 1970 rank[1] | 1966 rank[2] | 1959 rank[3] |
|---|---|---|---|---|
| Planning | 1 | 1 | 2 | 4 |
| Students | 2 | 2 | 1 | 1 |
| Information systems | 3 | 6 | 8 | not ranked |
| Faculty & staff | 4 | 8 | 4 | 2 |

Rank ordering of emphasis in current research, 1978
(by institution or agency type):

| Institution or agency type | Rank | Current research |
|---|---|---|
| Single-campus universities (N=164) | 1 | Budget and finance |
| | 2 | Planning |
| | 3 | Faculty and staff |
| | 4 | Information systems |
| | 5 | Students |
| Two-year colleges (N=90) | 1 | Students |
| | 2 | Planning |
| | 3 | Information systems |
| | 4 | Evaluation and measurement |
| | 5 | Enrollment and manpower forecasting |
| State/Provincial agencies (N=43) | 1 | Information systems |
| | 2 | Planning |
| | 3 | Budget and finance |
| | 4 | Policy analysis |
| | 5 | Enrollment and manpower forecasting |

[1]1970 AIR Membership Survey Form.
[2]Stecklein, John E. *A Look at the Charter Members of AIR*. 1966.
[3]Sprague, Hall T. *I.R. in the West*. 1959.

## Appendix C
## MEMBERSHIP REPORT (count)

| Complete membership years (January 1–December 31), 1973–1977 | | | | | |
|---|---|---|---|---|---|
| Membership type | 1973 | 1974 | 1975 | 1976 | 1977 |
| Distinguished | 3 | 3 | 4 | 4 | 4 |
| Emeritus | - | - | - | - | 3 |
| Regular | | | | | |
| New | 238 | 237 | 341 | 296 | 400 |
| Renewal | 752 | 788 | 782 | 877 | 901 |
| Graduate | - | 32 | - | - | - |
| New | - | - | 17 | 20 | 25 |
| Renewal | - | - | 9 | 16 | 21 |
| Total | 993 | 1060 | 1153 | 1213 | 1354 |

| Incomplete membership years (January-Forum), 1973–1978 | | | | | | |
|---|---|---|---|---|---|---|
| Membership type | 4/30 1973 | 4/30 1974 | 4/25 1975 | 4/24 1976 | 4/30 1977 | 4/30 1978 |
| Distinguished | 3 | 3 | 4 | 4 | 4 | 4 |
| Emeritus | - | - | - | - | 3 | 4 |
| Regular | | | | | | |
| New and reinstated | 117 | 133 | 192 | 223 | 271 | 219 |
| Renewal | 695 | 712 | 667 | 765 | 831 | 957 |
| Graduate | - | 28 | - | - | - | - |
| New | - | - | - | 15 | 19 | 19 |
| Renewal | - | - | - | 16 | 19 | 20 |
| In process | - | 38 | 31 | - | - | 112[1] |
| Total | 815 | 914 | 914 | 1023 | 1147 | 1335 |

[1]Includes all memberships being processed through May 17, 1978.

## Appendix D
## ANNUAL REPORT OF THE EXECUTIVE SECRETARY
### Jean C. Chulak

1977–78 has been another eventful, busy year for the executive office and for me. As we prepare to begin our fifth year together, I would like to bring you up-to-date on some of our activities since I reported to you last at the Forum in Montreal a year ago.

*The office itself.* When the graduate education programs of the Florida State University College of Education moved into the new graduate education center (the Stone Building) in January, we moved with them. Our new facilities provide us approximately 700 sq. ft., about half again as much space as we had and space badly needed as a result of our expanded activities.

*Personnel.* We have been very fortunate this year to have had the opportunity to work with Mary Martin, former director of institutional research at the University of North Dakota, who has served as graduate assistant while pursuing her doctoral degree. Because she will be on an internship in Paris and England next fall, a replacement will be chosen soon for the next academic year.

*General administration.* The nature of our activities in handling receipts, disbursements, accounting, and reporting on the status of association funds has not changed in the past year. It is, however, perhaps interesting to note that the volume of vouchers processed in 1977–78 will be about double that of our first year, 1974–75.

We have also continued to be responsible for minutes of executive committee meetings

and for the records of the Association as well as for responding to, or referring to others, the increasing volume of requests for information and materials.

*Membership*. There has been rather dramatic growth in the numbers of new and renewal members of the Association in the first months of 1978. As I left for the Forum (last Friday, May 19), the membership was 1335, a figure within 20 of our *year-end* 1977 membership of 1354. I expect that we will have surpassed that figure when the total of new members as a result of Forum registrations this week is tallied.

The services which we provide to the membership have continued to include compilation, publication, and distribution of the AIR membership directory and a dedicated attempt to keep the computer informed of your many promotions and other movements.

*Nonmember activities*. We have responded to inquiries from several hundred nonmembers and have initiated promotional mailings to several hundred others.

*Placement*. The executive office has coordinated the limited placement service for AIR members which is designed to put potential employers and employees in touch but not to screen or "search." There are currently more than 50 AIR members and 10 positions listed with the service.

*Professional visit program*. Working through the executive office, Craig Johnson, FSU-AIR liaison and AIR vice president-elect, has coordinated the first professional visit of an AIR member in the United States who will work abroad next year. This visit has incidentally resulted in an exchange, but it is not necessary that this be the case nor that the visit be intercontinental.

*Publications*.

Newsletter. Newsletter copy from Editor Douglas Mathewson continues to be assembled, printed, and distributed from the executive office. A feature which we have been able to contribute to the newsletter this year is a regular listing of new members since the previous issue.

Proceedings. Again this year, working with Editor Robert Fenske, the executive office has been responsible for the copyediting, printing, and distribution of the *Proceedings* of the 1977 Forum. This issue is currently at the printer and should be in the mail to 1977 members before the end of June.

*Forum*. This year saw some expanded responsibilities for the executive office in connection with the Forum. In addition to printing and distributing the early promotional, program, and registration materials and handling the preregistration function, we also coordinated the copyediting and printing of the final Forum program and abstracts as well as the computerized list of all preregistrants. We expect to correct and update that after the Forum to provide a complete and accurate list of all attendees which will appear in the new abbreviated *Forum Proceedings* to be printed this summer.

Our on-site responsibilities have included the training and oversight of the registration personnel and activities—which could not have been accomplished without the outstanding help and dedication of the local arrangements committee and the excellent workers provided by the host institutions.

*Regional Workshops*. The executive office was responsible for layout, printing and mailing of the brochure for the midwestern, southern, and western regional workshops as well as for the preregistration of participants.

*Other committees*. We have provided support services to other committees as well: to the Nominating Committee in the preparation and mailing of the call for nominations, and initial coordination of returns to the call; to the Executive Committee in the preparation and mailing of the election brochure and ballot; to the Community College Affairs Committee in the preparation of a large mailing to nonmember community college persons; to the Long-Range Planning Committee in the preparation of some of the materials included in their fall mailing to members. In addition, we have received and forwarded nearly 200 subscriptions to *Research in Higher Education*.

This list is long, and the activities are varied. There is never a dull moment nor one without its challenges. I remain grateful not only for the very frequent and generous expressions of support and appreciation but also for your constructive suggestions. I believe 1978–79 will be a good year, and I look forward to it.



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## Appendix E
## ANNUAL REPORT OF THE TREASURER
### William F. Lasher

AIR Financial Report, July 1, 1976–June 30, 1977[1]

Total Receipts

| Category | Approved Budget | Adjusted Budget | Actual Income |
|---|---|---|---|
| Budgeted receipts | | | |
| Membership dues | $32,500.00 | $32,500.00 | $32,293.56 |
| Forum | 30,250.00 | 30,250.00 | 40,515.79 |
| Publications | 3,600.00 | 3,600.00 | 2,099.54 |
| *New Directions* monograph | 1,500.00 | 1,500.00 | 0 |
| Interest | 3,000.00 | 3,000.00 | 3,340.06 |
| Miscellaneous | 500.00 | 500.00 | 1,102.00 |
| From reserves | 8,450.00 | 8,450.00 | 0 |
| Subtotal | 79,800.00 | 79,800.00 | 79,351.00 |
| Income from prior-year receipts | | | 661.00 |
| Total receipts | 79,800.00 | 79,800.00 | 80,012.00 |

Total Disbursements

| Category | Approved Budget | Adjusted Budget | Actual Disbursements |
|---|---|---|---|
| Budgeted disbursements | | | |
| Executive office: salaries/ wages/fringes | $20,500.00 | $20,500.00 | $17,414.56 |
| General administration | 9,050.00 | 8,700.00 | 8,160.30 |
| Forum | 11,500.00 | 14,700.00 | 13,165.53 |
| Member/Nonmember services | 7,300.00 | 5,050.00 | 3,493.74 |
| Nominations/Elections | 1,950.00 | 1,950.00 | 1,779.22 |
| Publications | 23,200.00 | 23,200.00 | 13,147.39 |
| Regional workshops | | 3,000.00 | 727.12 |
| Other committees | 300.00 | 700.00 | 260.87 |
| Program Development Fund | 3,000.00 | 0 | 0 |
| Contingency Fund | 2,000.00 | 1,000.00 | 0 |
| Subtotal | 78,800.00 | 78,800.00 | 58,148.73 |
| Capital outlay | 1,000.00 | 1,000.00 | 978.89 |
| Disbursements from prior-year budgets | | | 16,213.09 |
| Total disbursements | 79,800.00 | 79,800.00 | 75,340.71 |

[1]This report does not reflect accounts receivable of $2,497.31 or accounts payable of $9,849.78 on June 30, 1977. It also does not reflect either depreciation or in-kind income from FSU (and its allocation). Such detail can be found in the financial statements prepared by Catledge, Sanders & Sanders, Certified Public Accountants. These statements are available for examination upon request from the treasurer or executive secretary.

Cash Position

| Category | July 1, 1976 | June 30, 1977 |
|---|---|---|
| Cash assets | | |
| Petty cash | $ 20.00 | $ 20.00 |
| Checking account | 187.78 | 1,703.39 |
| Passbook savings accounts | 32,953.20 | 40,465.90 |
| Certificate of deposit | 36,184.34 | 36,987.92 |
| Prepaid postage and expenses | 547.07 | 430.52 |
| FSU agency account and grant | 191.07 | 333.10 |
| Total | 70,083.46 | 79,940.83 |
| Cash liabilities | | |
| State and federal taxes | 43.33 | 457.49 |
| Forum | | 886.51 |
| Prepaid income | | 3,655.00 |
| Miscellaneous | | 230.41 |
| Total | 43.33 | 5,229.41 |
| Net cash assets | 70,040.13 | 74,711.42 |
| Net change | | 4,671.29 |

## Appendix F
## AIR 1978–79 BUDGET PROPOSAL

| Category | Approved 77–78 budget | Adjusted 77–78 budget | Proposed 78–79 budget |
|---|---|---|---|
| Budgeted income | | | |
| Membership dues & fees | $33,500 | $33,500 | $37,500 |
| Forum fees | 33,000 | 34,375 | 42,900 |
| Workshops | 14,100 | 14,100 | 10,000 |
| Publication sales | 3,000 | 3,000 | 3,000 |
| Interest | 3,000 | 3,000 | 4,000 |
| Miscellaneous | 500 | 500 | 500 |
| Transfer from reserves | 10,000 | 10,000 | 8,900 |
| Total income | $97,100 | $98,475 | $106,800 |
| Budgeted expense | | | |
| Executive office salaries/ wages/fringes | $26,000 | $23,375 | $ ,150 |
| General administration | 8,400 | 12,800 | 15,650 |
| Forum | 14,900 | 14,275 | 14,700 |
| Membership | 4,600 | 5,750 | 5,800 |
| Nominations/Elections | 1,900 | 2,200 | 2,700 |
| Publications | 20,200 | 20,200 | 22,800 |
| Workshops | 14,100 | 14,100 | 10,000 |
| Other committees | 1,000 | 2,750 | 2,000 |
| Program Development Fund | 3,000 | 900 | 3,000 |
| Contigency | 2,000 | 1,000 | 2,000 |
| Capital outlay | 1,000 | 1,125 | 1,000 |
| Total expense | $97,100 | $98,475 | $106,800 |

## Appendix G
## ANNUAL REPORT OF THE POLICY ANALYSIS COMMITTEE (PAC) (formerly Data Analysis and Information Exchange Committee, DAIEC)
### Edith H. Carter, Chairperson

Since 1970 the Association has indicated a growing concern for the collection process and use of institutional data by various state and federal agencies. The Association established first an *ad hoc* Committee on Access to Federal Data. This committee was then changed to a standing committee and renamed the Data Analysis and Information Exchange Committee, with the central concern of the committee being to have some impact on post-secondary data collection and analysis at both the state and national levels of government.

This year, the Executive Committee, in an attempt to reflect the changing needs of the Association, renamed the committee Policy Analysis and charged the committee to study the impact of policies, data collection procedures, and data demands which would affect large segments of the association's membership. The intent is to focus on those agencies—both governmental and nongovernmental—involved in designing policies and procedures and collecting institutional data.

*Federal Paperwork*. In 1976, representatives from the Association became involved in a Work Group and a Federal Interagency Task Force to reduce the federal paperwork burden. Our committee has just received notification that much of the work by these two groups has been incorporated into bills currently in the House and Senate (H.R. 15 and S. 1760).

*Federal Register*. During the year, this committee responded to an HEW announcement concerning the methodology of data collection to be used for the "Survey of Recent College Graduates" in the *Federal Register* of August 17, 1977. It was apparent from the response received from HEW that, by the time a survey is developed to this stage, input from the Association is essentially meaningless.

The committee has pursued a project involving a meeting with various agency heads of programs involved in the collection of statistical data from institutions of higher education. However, it was the consensus of the Executive Board that the Association did not have the machinery to properly execute this project at this time.

*National Science Foundation*. This committee has continued the cooperative relationship established by the DAIEC with the National Science Foundation and its report of scientists and engineers.

Activities of the Foundation of concern to the Association include:

1. The establishment of an Advisory Committee for Policy Research and Analysis and Science Resources Studies to provide advice, recommendations, and oversight concerning program emphasis and directions of the divisions of PRA and SRS, including research, data collection and analysis, and support of extramural activities. (Lois Torrence, past president of the Association, is a member of this committee.)

2. Reduce both respondent burden and cost by not conducting the major surveys on an annual basis. Three surveys, the Survey of Graduate Science Student Support and Post-doctorals, the Survey of Scientific and Engineering Expenditures at Universities and Colleges, and the Survey of Scientific and Engineering Personnel Employed at Universities, will now be conducted biennially beginning this year.

3. Published in the winter issue of the association newsletter the most important findings from NSF's Survey of Scientific and Engineering Personnel Employed at Universities and Colleges for 1977.

*Postsecondary Education Policy Committee on Information (PEPCI)*. A member of the Association serves on this committee (PEPCI) in order to advise the Association of specific issues which may be of concern to the general membership. The PEPCI is currently investigating the Proposed Facilities Survey.

*American Council on Education*. This committee (PAC) is currently investigating the feasibility of a cooperative arrangement with the American Council on Education in establishing an information network to respond to governmental regulations and requests for information.

*Special Issues*. The Association must begin to define its goals and objectives, determine a specific direction for governmental relations, and begin to establish machinery to effectively influence governmental regulations.

*The Committee*. All members of the committee have devoted considerable time and effort to their specific assignments in order to bring increased awareness of the bureaucratic process to the Association. It has been a distinct honor to serve the Association as chairperson of this committee.

Members serving on this committee are: Harlan D. Bareither, Associate Vice President—Planning, University of Illinois; Richard M. Berry, NCHEMS; Webster C. Cash, Director, Institutional Research & Planning, Atlanta University Center; Denis J. Curry, Deputy Coordinator, Council for Postsecondary Education; Penny D. Foster, Associate Study Director, National Science Foundation; Edward D. Jordan, Director of Information Systems & Planning, Catholic University of America; and Walter N. Vaughan, Assistant to the Academic Vice President, University of Guelph.

## Appendix H
## ANNUAL REPORT OF THE LONG-RANGE PLANNING COMMITTEE
### Frank S. Black, Chairperson

Twelve hundred long-range planning questionnaires were mailed to the AIR membership on November 30, 1977. By January 30, 1978, the cut-off date for analysis purposes, 279 (23%) were returned. However, 66 were received after this data, thus the final survey return rate is 29%.

A preliminary report was made to the Executive Committee at its January 1978, meeting. A final report is scheduled for the November 1978 Executive Committee meeting.

## Appendix I
## ANNUAL REPORT OF THE PROFESSIONAL DEVELOPMENT AND SERVICES COMMITTEE
### Jack E. Rossmann, Chairperson

International Activities Subcommittee members are George Beatty, Aidan Duggan, Paul LeVasseur, Larry Litten, Bernard Sheehan, Lois Torrence, and Zuhair Warwar.

The International Activities Subcommittee held its only meeting in Houston during the Forum. After exploring several aspects of international activities of the Association, it was concluded that the Association's most important international activity is to attract increasing numbers of non-North American participants to the Forum. The subcommittee felt that one way to increase this participation is to increase the involvement of non-North Americans in "regular" sessions at the Forum as contrasted with "special" international sessions. This policy was subsequently recommended to the Executive Committee and the 1979 Forum program chairperson.

Professional Development Subcommittee members are Sid Micek, Don Reichard, and Janis Weiss.

The Professional Development Subcommittee held two meetings in 1978. On February 15, we met in Dallas to evaluate the 1977 regional workshops, to make plans for 1978 workshops, and to consider other possible professional development activities. We subsequently recommended to the Executive Committee that directors of the 1977 regional workshops be invited to submit proposals for 1978 and that during the summer of 1978 proposals would be invited from the AIR membership for 1979 regional workshops.

All three 1977 workshop directors agreed to submit proposals for 1978, and the subcommittee met with each of them in Houston to discuss workshop plans. Richard Perry will direct a workshop in Toledo from July 10–13; John Chase and William Tetlow will direct a workshop in the Seattle area in September or October; and Dan Coleman will direct a workshop in Orlando, Florida, in December.

## Appendix J
## ANNUAL REPORT OF THE AD HOC COMMITTEE FOR COMMUNITY COLLEGE AFFAIRS
### Edith H. Carter, Chairperson

The present Executive Committee of the Association approved the establishment of an *Ad Hoc* Committee for Community College Affairs for a two-year period. The committee was charged with the following tasks:

1. To increase participation by community colleges in AIR
2. To develop better input by community colleges in AIR
3. To make recommendations for appropriate activities.

Because of the emphasis on service to all members of the Association, community colleges have found a viable organization in which to participate. Special concerns of the committee this year have been Forum participation and increase in membership.

*Forum*. For many community college researchers, the Forum is the only opportunity to participate in research activities at the national level. Therefore, special programs which focus on community college research are needed. Scheduled for this year's Forum are: a workshop, paper session, session on community college planning, and special interest sessions. Individual community college members are also participating in other segments of the program.

*Affiliation*. Other national and regional research groups have been encouraged to affiliate with AIR. The Executive Committee recently approved the affiliation of the National Council For Research and Planning (an affiliated council of the American Association of Community and Junior Colleges). It is anticipated that other regional community college research organizations will apply for affiliation in the near future.

*Newsletter*. To develop a greater awareness among members of the Association for the unique position of institutional research in the community college, a state-of-the-art article was published in the winter issue of the newsletter.

*Membership*. A focal point of this year's activities has been to increase membership. The committee identified from various records a list of 1200 community college professionals as potential members. Appropriate membership materials along with a personal letter from the committee were mailed to each person on the list.

*Future Direction*. Plans for the future include: (1) greater emphasis on publication of quality research by community college researchers, and (2) special regional workshops for community college interests.

*Committee Members*. Members serving on the committee are: Stuart M. Bounds, Coordinator of Institutional Research, Thomas Nelson Community College; George A. Clovis, Director of Institutional Research, Parkersburg Community College; Sandra L. Drake, Staff Associate, American Association of Community and Junior Colleges; Horace F. Griffitts, Director of Research, Tarrant County Junior College; Paul E. Kunkel, Director of Research & Planning, Parkland College; and Gary A. Rice, Director of Institutional Planning and Management Systems, Yakima Valley College.

## Appendix K
## ANNUAL REPORT OF THE PUBLICATIONS BOARD
### Marvin W. Peterson, Chairperson

**Continuing Publications.**

In light of significant changes in our publications package this year, there were only minor changes in the existing publications.

*1977 AIR Forum Proceedings*. These have been prepared by Robert Fenske, editor, and Paul Staskey, associate editor, and will be distributed to members shortly. This will be the final publication of the *Proceedings* in this format.

*New Directions for Institutional Research*. Under our continuing contract with Jossey-Bass, this series has expanded in popularity and has, during 1977, required about half the

subsidy anticipated. Paul Jedamus, newly appointed editor, is currently planning the 1979 issues. The following 1978 issues are in production: Meredith Gonyea, *Constructed Cost: Examples from Health Professions Education;* David Leslie, *Issues in the Employment of Part-Time Faculty;* Robert Fenske, *Defining Institutional Goals;* James L. Miller, Jr., *Assessing Changes in Campus Autonomy*.

*Newsletter*. This year the newsletter has expanded its coverage of membership issues and of reports of association activities—particularly of our major committees. Douglas Mathewson has been reappointed for a second term as editor for 1978–80.

*1977–78 Directory*. The *Directory* was published in the format adopted last year.

**New Publications.**

*Research in Higher Education* (RHE). Effective January 1, 1978, AIR entered into an agreement with APS Publications establishing *RHE* as an AIR-affiliated journal. The editor, Charles Elton, who is an AIR member, will continue in that position. He also became an ex-officio member of the Publications Board. The journal will feature a section in each issue devoted to commentary on scholarly or professional developments in the field of institutional research. Cameron Fincher has been named associate editor for this section. A "Special" AIR Forum issue will be produced each year featuring a selection of outstanding papers presented at the last Forum. AIR members receive a discount on subscriptions to RHE and a copy of the "Special Issue" free. The board of consulting editors to the journal has also been expanded to insure that at least 50% are AIR members as required in our contract.

*Professional File*. This new series will begin during 1978 under the initial editorship of Richard Perry and will have its own editorial advisory board. It will be devoted to practical developments in the field and will be distributed free of charge to the membership as an insert in the *Newsletter*. The editor becomes an ex-officio member of the Publications Board.

*Forum Publications*. Beginning with the 1978 Houston Forum, two new publications are planned and will replace the current *Forum Proceedings*. Robert Fenske and Paul Staskey have agreed to serve as Forum Publications editor and associate editor in the transition period. The two new publications are:

1. "New" *Forum Proceedings:* a comprehensive record of the Forum to include major invited general session addresses, the presidential address, record of Forum and arrangements, minutes of business meeting, summary of special interest group meetings, abstracts of contributed papers, summary of seminar panels, and an announcement of the Suslow Award.

2. *Collection of AIR Forum Papers:* a selected group of contributed and submitted papers which were presented at the Forum, which meet the Forum editor's prescribed editorial guidelines, and which are screened by the editor's Forum Papers Review Committee. The collection will be available through the ERIC Clearinghouse on Higher Education.

The Forum Publications editor will also have the responsibility for setting editorial guidelines for Forum papers submitted for publication, coordinating an initial screening of papers to be considered for the "Special AIR Forum" issue of *RHE*, and coordinating the selection process for the Sidney Suslow Outstanding Forum Paper Award. He will also be an ex-officio member of the Publications Board.

**Other Activities.**

*Sidney Suslow Outstanding Forum Paper Award*. Announcement of the first Sidney Suslow Outstanding Forum Paper will be made at this Houston Forum. It will be awarded to the author of a paper submitted at the 1977 Montreal Forum. The selection is based on the recommendation of the Publications Board by a committee composed of the five AIR publications editors. The award is officially endorsed by the Executive Committee.

*AIR Member Discounts*. Effective this membership year, the Publications board arranged for AIR members to obtain subscriptions to the AAHE-ERIC *Research Report* series at the AAHE discount rate.



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**AIR Publications Board.**

Members of the Board (and their term expiration dates) are Marvin W. Peterson, Chair (1979), Alfred L. Cooke (1980), Mary E. Corcoran (1978), John A. Lucas (1980), James R. Montgomery (1979), and William M. Sibley (1978).

Editors and ex-officio members are Charles Elton, *Research in Higher Education;* Robert H. Fenske, *Forum Proceedings;* Paul Jedamus, *New Directions for Institutional Research;* Douglas Mathewson, *Newsletter;* and Richard Perry, *Professional File.*

Associate editors are Cameron Fincher, *Research in Higher Education;* and Paul Staskey, *Forum Proceedings.*

## Appendix L
## RESOLUTION

Be it resolved that the Association for Institutional Research affirms its belief that sex discrimination is no less an abomination than is discrimination because of age, race or national origin. To recognize in any form the right of others to so discriminate is to in some way be guilty of the act ourselves. The Association for Institutional Research therefore further affirms its belief in the Equal Rights Amendment and all the privileges thereto affixed. In public pronouncement and affirmation of its stance, the Association resolves henceforth not to hold its Annual Meeting or other regularly scheduled membership supported activities in states wherein the Equal Rights Amendment has not been ratified or has been rejected.

In support of this resolution, we the undersigned members of The Association for Institutional Research have affixed our signatures.

(Note: This resolution was signed by forty persons. The original resolution, with signatures, is on file in the Executive Office.)